



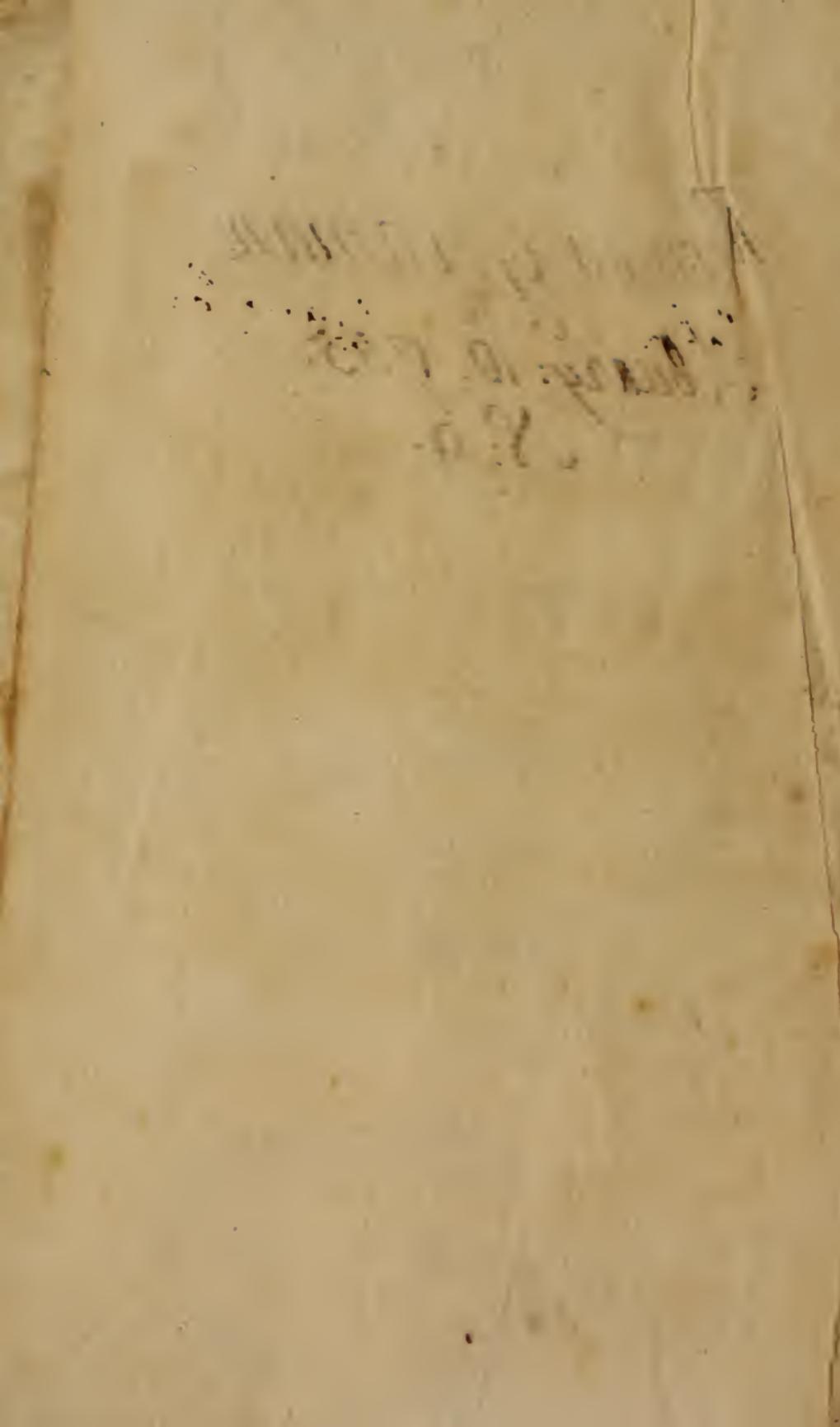
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John Crawford,
M. D.



13a

Thomas Goodman
February 18. 1755.
N. 9.



EIGHT
CHIRURGICAL
TREATISES,
John ON THESE *Crawford*
Following HEADS:

VIZ.

- | | |
|----------------------------------|-------------------------------------|
| I. Of TUMOURS. | VI. Of GUN-SHOT WOUNDS. |
| II. Of ULCERS. | |
| III. Of DISEASES of the ANUS. | VII. Of FRACTURES and LUXATIONS. |
| IV. Of the KING'S EVIL | VIII. Of the LUES VE- NEREA. |
| V. Of WOUNDS. | |

By *RICHARD WISEMAN*,
Serjeant-Chirurgeon to King CHARLES II.

VOL. II.

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Crawford



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T R E A T I S E
O F T H E
SCHOOL OF MEDICINE
1813
KING's-EVIL.

The FOURTH BOOK.

C H A P. V.

Of Ophthalmia.



ORE Eyes are frequently a Species (as I have said) of the *King's-Evil*, and take their Beginning from vicious Humours, inflaming the *Tunica adnata*, which increasing doth also sometimes affect the other Tunicles, as the *Cornea*, &c. with great Pain, Tension, Pulsation, &c. whence *Pustulæ* arise and suppurate, terminating for the most Part in Ulcers, which leave hard *Cicatrices*, and by reason of the sharp Defluction falling upon the Edges of the Eye-Lids, do make a Blearedness: Upon which Account these Inflammations are generally called *Lippitudo* by the *Latins*.

VOL. II.

A

This

Difference. This differeth from the common *Ophthalmia*, in that it is Periodical, and is accompanied either with strumous Swellings in the Neck, a thick chapt upper Lip, *Ozæna*, or some other Accident.

Causes. The *Causes* are the same with those of the *King's-Evil*; yet may it be more particularly imputed to abundance of Humidity repleting the Head, and descending to the weak Eyes.

Signs. The Signs of *Ophthalmia* are apparent by what I have already delivered of the Disease. Those of the Causes are as follow. If the *Ophthalmia* be from Plenitude, the Face is high-coloured, the Eye-Lids somewhat swelled and inflamed, the capillary Veins large and full; yet the Humours are not so apt to fret as in other Cases, nor is the Pain extremely vehement. If the Disease be from Choler, the Visage is not red, but the Pain is sharper, and with Excoriation of the Eye-Lids. If the *Ophthalmia* proceed from pituitous Humours, all the fore-mentioned Symptoms of Inflammation, Pain, &c. are more remiss, and the lacrymal Humours are not corroding, unless there be a Mixture of saline Humour joined with it. Whether an *Ophthalmia* may arise from Melancholy, I doubt; but if it do, there is small Fluxion or Pain. That proceeding from the *King's-Evil* is of an acid Quality, with sharp Fluxion and Pain; the Eye-Lids are also more apt to be gummed together with a viscous Humour, than they are in those from the other aforesaid Causes. Whether the Humours affecting the Eyes, flow from the external or internal Vessels, may be discerned by their Complaint. For if they flow from the *Pericranium*, &c. the Pain, Pulsation, with Heat in their Forehead and Temples, will demonstrate it: But if the contrary, the Pain will be more intense, and deeper within, amongst the Membranes; there will be also an Itching in the Palate and Nostrils, with frequent Sneezing.

The Time of the Inflammation ought also to be considered in order to the Cure; and is thus discerned: In the Beginning the Eyes look red, and the Humours distilling upon them are thin; in the Augment, Heat and Pain increase; in the State, the Accidents of Inflammation and Pain are great, and the Humours thicken, and do gum the Lids together, especially in the Night;

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in the Declination, the Fluxion, Pain, &c. do visibly diminish.

Ophthalmia strumosa, is of most difficult Cure, and in *Prognos-* Children very vexatious, by reason of the Humidity *tick*. they abound with; also because of their Frowardness, and Incapacity of taking proper Remedies, or admitting external Applications: And in Consideration of the Laxity of their Eyes, they are subject to relapse upon every little Disorder. Those arising by Consent from the internal Parts, the *Dura Mater*, &c. are incident to more grievous Symptoms, than those which proceed from the *Pericranium*, and other external Parts.

If in an *Ophthalmia* the Pain, &c. persevere any long Time, there is Danger that the Tunicles of the Eye may be corroded: And if the *Cornea* happen to have been long ulcerated, a Blindnes followeth, or at least a Dimness of Sight, by reason of the Condensation of a gross Matter about the Pupil.

In order to the *Cure*, their Diet ought to be of Meat *Cure.* of easy Digestion, as hath been shewed in the Method of Cure of the *Evil*, with great Moderation, avoiding all sharp, salt, hot, or spicy Meats, and such as may beget Cruditie. In the Beginning of the Disease Wine is forbidden. *Hydromel* is allowed: But in hot bilious Defluxions *decoct. hordei cum tantillo aq. cinnam.* is only permitted. The Air ought to be pure and temperate; that which is windy, dusty, or smoaky, being offensive to the Eyes; so is Sun-shine: Therefore we advise them to wear somewhat of Silk or Linen before their Eyes, commonly a Piece of green Sarcenet. Exercise of all Kind is forbidden, and Quiet enjoined. Sleep is in these Diseases necessary, when they can get it, the Eyes enjoying Quiet the while, which mightily conduces to their Recovery. Their Bodies ought to be kept soluble by Clysters and lenient Purges; strong Catharticks being not approved of in Diseases of the Eyes. Yet according to *Hippocrates*, *Ophthalmia laboranti alvi profluvium bonum est*: And we sometimes see, after a Superpurgation, the Fluxion much diminished. But that may rather be imputed to Nature, which so disburtheneth herself. In prescribing to these Diseases, the Constitution must be considered, and after Purging, Anodynes are necessary, to quiet the Fermentations raised thereby; to which

Purpose conduce *syrup. paralyseos, de papavere erratico, de papavere composit. Mesue*, of which this is the Prescription. Rx *capitum papaver. albi & nigri, cum suis seminibus an. 3vj. & 3ij. capill. Veneris 3xv. glycyrrhiz. 3v. jujubar. num. xxx. sem. lactucæ 3v. malvæ, cydon. an. 3vj. coq. in libviii. aq. font. ad medietatis consumptio nem; post modicum Rx solaturæ libij. penidiorum, sacchar. alb. an. libj. fiat Syrupus.* All the testaceous Powders prescribed in the general Cure of *Strumæ* are here of Use, also *Calomel. Merc. præcipitat. alb. Merc. diaphoret. bezoard. mineral. antimon. & ceruss. diaphoret.* avoiding Salivation, by purging the *Mercury* off sometimes with *infus. rhab. syr. rhab. & de cichoreo cum rheo, diaforeos, &c.* In the Declining of the *Ophthalmia*, and indeed after general Evacuation and Diversion of the Humours, you will find bathing the Body in Water lukewarm of great Advantage to contemperate hot and sharp Humours, if the Season of the Year and their Age be capable of it.

Derivation is necessary in this Disease; and if there be Inflammation, or that Blood abound, they may bleed by Lancet in the Arm, Neck, &c. otherwise by Leeches behind the Ears. Shaving the Head, Blistering, Cupping, Fontanelles and Setons, are of frequent Use: But Fontanelles made in the Neck do often cause *Strumæ* to arise thereabouts; therefore Sir *Francis Prujean*, some Years before his Death, prescribed them behind the Ears.

In the Application of external Remedies to the Eyes, we ought not to be over-forward; for the mildest Medicaments dropt into them, prove generally offensive in the Beginning of Inflammation: Besides, we see in our daily Practice, that the less Disturbances of them go off by general Evacuation and Derivation; and that those Eyes have fared worst which have been most treated by Topicks. We may apply Intercipients upon the Temples, ot Mastick, *Takamahaca, empl. ad herniam, &c.* Frontals may also be applied of *bol. Armen. sangu. dracon. balaust. cum aceto & albumine ovi.* If you judge the Humour to flow from the *Pericranium* and external Parts, you may apply Astringents to the Jugulars and round about the Neck. But if the Inflammation be sudden, and the Pain vehement, after Evacuation by lenient

lenient Purgatives, or a Clyster and Venæsection, you may have recourse to Anodynes; amongst which Breast-Milk, and the White of a new-laid Egg have Precedency, applied externally, or dropt into the Eye. There are Objections made against the Use of them both, viz. that by the dropping of Milk into the Eye it may curdle, and by its Acrimony offend the Eye: So also the White of an Egg may, by its incrassating Quality, increase the Heat in them. To prevent these Inconveniences, you may mix them with Rose-water, or use them with more Caution. In the preparing Medicaments to drop into the Eyes, the Ingredients, mixed with the *Collyria*, ought to be well washed, that they may be without Acrimony, and so subtilly powdered, as that they be not in the least gritty. The Decoctions ought also to be cleanly made: And in the Dressing of the Eyes, there ought to be especial Care in cleansing them and their Lids of viscous Matter; to which Purpose an Eye-Cup is most necessary. This being observed, you may apply mucilaginous Liquors, or Cataplasms; for they are good Anodynes. Rx *mucilag. sem. psyllii, cydonior. cum aq. ros. & papaver. extract. an. ʒj. camph. croci, an gr. vj. album ovi, Misc.* Or, Rx *medullæ panis alb. in latte & aq. ros. maceratae, pulpa pomorum dulc. an. ʒj. mucilag. sem. psyllii & fænugræc. aq. papaver. extract. an. ʒls. vitell. ovi, camph. gr. vj. croci ʒj. Misc.* If Pain be vehement, you may add to either of them two Grains of Opium, or a *mucilag. sem. papaver. albi* extracted *cum aq. plantag. ros. &c.* applied in the Form of a Cataplasm.

But if the *Ophthalmia* be not accompanied with grievous Pain, you shall then consider whether the Disease be in its Beginning, State, or Declination, and proportion your Medicaments accordingly. For let the Empiricks boast of this or that universal *Collyrium*, they cannot cure these *Ophthalmiæ* with any one particular Medicament: For in the Beginning of Inflammation they require Repellents, and in the Increase somewhat of Resolvents ought to be mixed with them; in the State they ought to be treated with Resolvents of a digestive Quality; and in the Declination, with Resolvents and Deteritives of an exsiccant Quality. Authors do not all agree of the set Time, when we should begin our Applications to the Eyes; but all of them concur in the

proceeding first with general Evacuation and Diversion of the Humour, and afterwards, suppose about the Third Day, to use *Collyria*. They ought to be moderately repelling; not too stiptick, lest the Tunicles of the Eyes be thereby dried, and prohibit Transpiration, and so increase the Pain.

We begin with Repellents: Of which Sort the strongest, are the Whites of new-laid Eggs beaten to a Froth, with a Piece of Alum. You ought to apply it to the Eye-Lids, the Patient lying upon his Back the while. This is only proper in the Beginning of hot Defluxions. Rx troch. alb. Rhas. 3ss. bol. Armen. 3ij. aq. ros. rub. lact. muliebris, an. 3jss. mix them in a Stone Mortar, and strain it out for Use. Rx pulpa pomor. acidor. vel cydonior. coct. in aq. ros. & plantag. 3ij. sumach, balaust. flor. ros. rubr. pulver. 3ss. far. hordei 3j. succ. sedi maj. plantag. an. q. s. Misc. & fiat Cataplasma. After the taking of the Cataplasm, toment with this: Rx fol. plantag. Mj. flor. ros. rub. Pj. balaust. 3ij. coq. in aq. equiseti & ros. an. q. s. fiat Fatus. The Third Day, or accordingly as the Disease indicates, we add Discutients to the Repellents. Rx flor. stachados, sambuci, an. Ms. flor. ros. rub. Pj. coquant. in aq. plantag. pro Fatu. Rx colaturæ superscript. 3ij. sarcocol. 3j lap. tutiae preparat. 3ss. nutritur in mortario marmoreo, & coletur pro usu.

In the State of the Disease Authors generally apply Resolvents, viz. sem. lini, fœnugræc. althææ, flor. melilot. chamæm, &c. decocted in Water, and applied warm with Stupes. It asswaged the Pain by breathing out the gross Matter. The *Collyria* may be a Solution of *Thus*, *sarcocoll. sacchar. albi*, *lap. tutiae*, &c. in the preceding Decoction: Or, Rx decoct. sem. fœnugræc. 3ij. thuris, *sarcocolla*, an. 3ss. croci 3ss. Misce probe, & oculo instilletur. To prevent the Gummimg of the Eye-Lids, cut a Piece of Sponge, fit to cover the Eye, and at Night, when the Patient is in Bed, dip it in aq. *verbena*, *euphrasie*, *rosar.* any one of them, and lay it wet upon the Eye, the warmer the better, so it do not scald. This will keep the Eye cool, and suck up the Moisture.

In the Declination, Rx tutiae preparatae 3j. alses lotæ 3ss. *sacchar. alb.* 3ij. infund. in aq. *fœniculi*, *verbena*, *euphrasie*, *rutæ*, an. 3j. postea colentur, & ad usum serventur: Or, Rx vitrioli albi, *tutiae* preparat. an. 3j. *camphoræ*

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phoræ ej. infund. in aq. ros. pro Collyrio. In case the Tunicles of the Eye grow too dry, Rx folior. endiviae, nymphœ, lactuæ, solani, flor. violar. ros. rub. an. Mj. radic. althææ zjss. sem. fænugræci zjij. coq. pro Fotu. After the Use whereof, you may apply unguent. tutiæ mag. ad oculos; or this; Rx butyri Maialis fine sale, unguent. ro-sat. lot. in aq. ros. an. zjss. lithargyr. aur. & argent. an. zj. aloes zjij. camphoraæ zls. Misc. S. A. in mortario plum-beo pro usu. These are to be put into the Corners of the Eyes at Night going to Bed; and in the Morning cleanse them with this or such-like: Rx aq. agrimon. rosar. laetis muliebris, an. part. æqual. Misc. In other Cases greasy Unguent ought not to be applied to the Eyes.

A Child about six Years of Age, heretofore subject to 1. *Observation on the King's-Evil*, was the last Summer distempered with a Heat scattering over her Head, Face, Neck and Shoulders, which meeting with some Check, returned inward, and affected her Eyes with Inflammation and great Fluxion. Upon Notice thereof, I directed a Clyster of Milk, Sugar, and a little Salt, applied *emplast. ad herniam* upon her Temples, and prescribed the dressing her Eyes with Breast-Milk *cum albumine ovi con-quasset*, and Cloths to be dipt in the same, to lie on all Night. The next Morning Leeches were applied behind the Ears, and four or five Ounces of Blood was taken away; that Day also a Clyster was again repeated, and the Applications to the Eyes continued. The next Morning were given her seven Grains of *Calomel.* with fifteen gr. *sacchar. alb.* which purged her four Times. That Night she took of the anodyne Syrup, *cochl. i. in aq. papaver. zjij. aq. cinnam. hordeat. cochl. ij.* also a *Cataplasm ex pomis acid. &c.* was applied. She rested well that Night, and in the Morning her Eyes were marvel-lously recovered.

A Child of about ten Years of Age, having been long 2. *Observation on diseased with sore Eyes, and passed through most of the Empiricks Hands in the Town and Country, came to Ophthal-mia, with great Fluxion, Pustulæ and Cicatrices from for-mer Eruptions.* She had also some small Glands on both Sides of her Neck. I applied Plasters upon her Temples to resist the Influx, and made Fontanelles behind

both her Ears by Causticks. I likewise fomented her Eyes with a Decoction *ex. flor. sambuci, chamæm. stœchad. ros. rub. & furfuris*, and brought her an Eye-Cup, and a Collyrium of *sarcocoll. lap. tutiæ & sacchar. in aq. pomor. dulc.* to wash her Eyes. I purged her the next Morning with *infus. senæ, rhab. &c. cum syrupo ros. & agarico*, and laid her to rest at Night, with an Anodyne Draught. The Day after I drew some Blood by Leeches behind her Ears; and the next Day prescribed her a medicated Ale of *sarsa, lign. lentisc.* with *milleped. &c.* for her constant Drink; with which she took *antimon. diaphoret.* Once in four or five Days I purged her with *Merc. dulc. cum saccharo*; and those Days she did not purge, I bathed her in Milk and Water temperately warm. I did not use many *Collyria*. A Solution of *lap. tutiæ cum sacchar. in aq. plantag. & ros.* finished the Cure; which indeed was done by contemperating the acid Humours. There remained some *Cicatrices*, which I left to wear off, it being the Work of Time; which accordingly effected it. The Glands did resolve during her Course of Physick, and she continueth very well to this Day.

3. *Observat. of Ophthalmia.*

A Child aged about ten Years was diseased with a sharp Defluxion on both her Eyes, with an *Ozæna*, and thick chapt upper Lip. She had also a Fontanel in her Neck, which was much inflamed, and many Wax-kernels about it: Which I supposing to arise from the Anguish of it, threw out the Pea, and dressed it with Lenients, at the same Time applying Causticks behind her Ears. I also applied *empl. ad kerniam* to her Temples, and prescribed a Fomentation and *Collyrium*, as it is set down in the Method of Cure in the State of the Fluxion. I advised the snuffing up of *ol. amygd. dulc.* to free her Nostrils of the crusty Matter which hinder'd her breathing, and afterwards prescribed her a *decoct. hordei cum radicibus althææ*, which was cast up her Nostrils with a Syringe, desiring her to forbear picking of her Nose. Her Lip was fomented with some of the said Decoction, and anointed with this following Unguent. Rx *seri vitulini & agnini an. ʒij. unguent. refrig. Galeni ʒj. succ. plantag. solani, an. ʒx. coquantur. ad succor. consumptionem: Colaturæ adde cerussæ ʒij. plumbi usli ʒvj. litharg. aur. & argent. an. ʒls. antimonii, tutiæ, an.*

an. 3ij. olei vitell. ovor. 5x. ceræ alb. q. s. fiat Unguentum S. A. During these Applications, a Clyster was prescribed, and she was purged with *infus. sene*, *rhab.* &c. and afterwards *Calomel.* was appointed her once in three or four Days; also a medicated Ale of *sarsa*, *lign. lentisc.* *milleped.* &c. for her constant Drink. *Bezoard.* *mineral.* was likewise prescribed those Days that Purging was intermitted. By this Method the Fluxion was removed from the several Parts, and the Ulcerations dried up; those in her Eyes by *Collyria* of *lap. tutiæ calamin.* &c. 2nd the *Ozœna* by *decocct. rad. tormentill.* *bistort.* *sumach.* *balauſt.* &c. in *aq. chalybeata.* Towards the End of her Course of Physick, observing her Skin rough and dry, I caused her to be bathed in Water temperately warm, with a Bag of Bran to sit upon. A *Cicatrix* remained upon one of her Eyes, but it afterwards wore off.

A Child of about five Years of Age was brought out 4. *Obſer-*
of the Country to me with great Dfluxions in both his *var.* of
Eyes, and his upper Lip swelled from the ſame Humour. *Ophthal-*
He had paſſed thro' various Hands unſucceſſfully in the *mia.*
Country. I purged him with *infus. rhab.* in ſmall Beer,
cum syr. diaſer. and once in two or three Days gave him
a few Grains of *Merc. diaſkoret.* and ſome Nights
an Anodyne Syrup in *aq. papaver.* I alſo preſcribed a
Fetus and *Collirium,* as is ſet down in the Method of
Cure in the State of the Fluxion. By which Method
the Fluxion ceaſed, and he recover'd in 10 or 12 Days.
A few Days after he fell ſick of the Small-pox, of whiſh
he likewiſe recovered. I then deſigned the purging
him; but his Friends not thinking it neceſſary, I deſtituted from viſiting him, till his Eyes inflamed again;
and then they ſent for me. I purged him with Whey,
Manna, and *Sal. prunell.* applied Repellents to his Fore-
head and Temples, and drew Blood by Leeches behind
his Ear; alſo repeated lenient Purgatives with *Calomel.*
once in three or four Days, 2nd made Fontanelles behind
his Ears; his Hair was shaved off his Head, and a quilted
Cap was put on. Anodynes were dropt into his Eyes, ac-
cording to the Method propoſed in painful Dfluxions,
by which they were eafeſed. But ſoon after he fell into
a *Diarrœa,* by which he was perfectly freed of the De-
fluxion on his Eyes and Lip. But the *Diarrœa* ter-
minated

minated in a *Dysenteria*, and weakened him much. I prescribed him *decoct. corn. cervi usci*, with a few *rad. scorzonerae, cinnamomi*, which he drank with Milk. Clysters of Milk *cum vitell. ovi* were frequently administred, and a few Drops of a liquid *Laudanum* at Night in the aforesaid Decoction. Afterwards I strengthned his Bowels with *elect. diacord. conf. ros. rub. pulv. Rhei*, &c. by which he was also moderately purged. He afterwards recovered Strength by continuing his Milk-drink. During his *Diarrhoea*, I healed up the Fontanels behind his Ears, and after his Recovery made him a Fontanel in one of his Arms, and dismiss'd him. He was afterwards in the Country subject to some little Weakness in his Eyes at times, upon some Accident of Cold, upon which Account his Friends consulted me; but of late Years he hath been very well.

5. *Obser-*
vat. of
Ophthal-
mia.

A Child aged three Years, was brought to *London* to me, with sharp Defluxions upon both his Eyes, and *Strumæ* on both Sides of his Neck. I applied *empl. ad berniam* to his Temples, fomented his Eyes with Repellents and Discutients, and made Fontanels behind both his Ears. The second Night after, I gave him viij gr. *Merc. diaphoret.* and in the Morning purged him with Rhubarb-drink, repeating this Method once in five Days; and on the intermitting Days, I gave him a Scruple of Dr. *Walter Needham's pulv. antifrumat.* By this Course the Child recovered, and was returned into the Country. Since that he hath frequently relapsed, and new *Strumæ* have arose; but by prosecuting the former Method he hath recovered as often, and the *Strumæ* afterwards resolved, we scarce applying any thing to them.

6. *Obser-*
vat. of
Ophthal-
mia.

A young Gentleman of about 16 Years of Age was, after the Small-pox, afflicted with sore Eyes, with a *Pustula* in one of them; which not yielding to the common Method of Purging, &c. I was consulted, and prescribed a *Fotus* and *Collyrium*, as in the State of the Fluxion; and by giving him three Doses of *Merc. dulcis* of 15 Grains *per dosin*, in 10 Days I cured him of his Distemper so perfectly, that it returned no more.

7. *Obser-*
vat. of
Ophthal-
mia, with
Ozana.

A Child of about eight Years of Age had been diseased two Months with sharp Defluxions upon both her Eyes, with *Pustulae* and Excoriation of the Lids; she had also

also an *Ozæna* and thick upper Lip chapt. I purged her with *syr. diaferos* in a Draught of Whey in the Morning; and some Hours after sent her some astringent Emplasters to apply to her Temples and Forehead, prescribing the bathing her Eyes with Breast-milk, mixed with *aqua plantag.* That Night she took an Anodyne Syrup in a Draught of Mace-Ale, and slept with Sponges upon her Eyes, dipt in the foresaid Liquor. The next Morning I let her Blood in the Arm six Ounces, and syring'd her Nostrils with *decoct. hordei & radic. althæa*, advising her to forbear picking her Nose. Her Lip was anointed with *unguent. tutiæ ad oculos*, with an Addition of *Merc. precipitat.* finely powdered. The next Morning I gave her 12 Grains of *Merc. diaphoret.* and from that Time purged her once in five Days with *Calomel.* *in conf. rosar. damasc.* and caused her to be bathed the intermitting Days. After I had cleansed her Nose of its crusty Filth, I syringed it with this following Decoction: Rx fol. plantag. summitat. rubi, equiseti, an Ms. myrobolan. citr. 3ij flor. ros. rub. Pj. pom. granat. num. j. contund. & coq. in aq. plantag. & ros. rub. an. tbj. Colaturæ adde *syr. diamoron.* de ros. sicc. an. ʒiss. mollis Ægyptiaci ʒj. Mis. pro usū. Her Eyes recover'd after the first bathing so well, that she was able to look upon the Light, and in less than 14 Days was perfectly recover'd. But about a Year and a half after, she grew indisposed, and was seized with Convulsions. I purged her with *infus. senæ rhab.* &c. and afterwards prescribed her three or four Doses of *Merc. dulcis*, and thereby freed her of those Convulsions.

A Child aged about six Years, of a weak tender Constitution, having been long subject to Defluxions upon *vat.* of his Eyes, Catarhs, &c. was, after several unsuccessful Ophthalmic Attempts, recommended to my Care. I began with mia. the making him a Fontanel in his Neck by Caustick. It had been made 16 Days before he knew of it, and then it was descried by the clinging of his Hair to the Plaister. From that Time he grew foward with it, and in Compliance with him it was healed up again two or three Months after. Having fix'd the Fontanel, I began to purge him with an Infusion of Rhubarb in a small Ale, and gave him six Grains of *Merc. diaphoret.* in a Spoonful of White-bread and Milk, repeating this Powder

Powder and the Infusion of Rhubarb once in four or five Days. So often as I design'd larger Evacuation, I mixed a purging Syrup with the Rhubarb-drink; and the following Night prescribed him a Spoonful of the Anodyne Syrup in Mace-Ale, or what else he best relish'd. A Pearl-Julep was made him of a distill'd Milk, *cum aq. cinnam. hordeat. & sacchar. alb.* also a medicated Ale was prescribed him of *sarsaparill. lign. lentisc. santal. alb. passifl. maj. enucleat. flor. salviae, beton. euphrasiae, milleped. cort. citr. & nuc. moschat.* He was extream nice in taking any thing of Physick, so was for the most part cheated into it. He was also more shy in admitting of Topicks. Sometimes in Extremity of Pain in his Eyes, Stupes were applied to them wrung out of a decoct. *flor. sambuci, cham. ros. rub.* &c. *Collyria* were more rarely applied; those that were used were *aq. pomor. dulc.* and sometimes other distill'd Waters, wherein had been infus'd *troc. alb. Rhas.* or *sarcocoll. lap. tutiae, saccharum.* The Water was filter'd clear. The Medicaments we laid the Stress mainly on were, *infus. rhab. and pulv. Merc. diaphoret;* by which, and the Anodyne Syrup, he was certainly relieved in his greatest Extremity. He was frequently well three or four Months together, and at length hath in a great measure worn off the many Disturbances; yet, being of a tender Constitution, may be incident to Defluxion upon his Eyes; but he hath been hitherto certainly relieved, as I said, by the aforesaid Prescriptions.

9. Obser-
vat. of
Ophthal-
mia.

A young Woman about 23 Years of Age, had many *Strume* on both Sides of her Neck, down the Length of the *Musculi mastoides*; some large, flat and round; others oval, of a different Size: She had much Pain in her Head, and was subject to a Catarrh. I purged her with *infus. senae, rhab. cum syr. ros. cum agarico, &c.* and prescribed her a decoct. *sarsæ,* with Antistrumaticks; also *Eezoard. mineral.* and purged her afterwards once in five Days with *Calomel.* and *diagrid. cum syr. de pomis magistral.* I fomented the Glands with *decoct. rad. gladioli, cucumberis agrest. bryoniae, &c.* and embrocated them with *ol. ex. ped. bovin.* some time, and afterwards applied a *Malagma* of *Corn. Cels.* by which they dissolved very much, and she recovered good Health. But about six Months after she came to me, afflicted with a severe

Defluxion

Defluxion in both her Eyes. I let her Blood in the Arm 10 Ounces, and repeated the former Course of Physick; then prescribed a lenient *Fotus* and a *Collyrium ex mucilag. sem. psyllii*, &c. and let her Blood in the other Arm seven or eight Ounces, applying *empl. è pice Burgund.* to her Neck, and Intercipients to her Temples; by which she recovered of the Defluxion in her Eyes, and by the use of a *Collyrium ex. infus. croc. metal.* her Sight grew strong.

A young Gentlewoman came to London, labouring 10. *Obser-*
under great Inflammation with a *Pustula* in her Left *vat. of*
Eye. She had also a *Struma* in her left Foot, about the *Ophthal-*
Instep, lying very hard and big amongst the Tendons. *mia.*

Dr. *Prujean* and Dr. *Bate* were her Physicians. She began her Course of Physick with this Prescription. Rx fol. *senæ* 5vj. *rhabar. turbeth. an.* 3jss. *hermodact.* 3j. *salis tartari* 3j. *flor. sambuci Pij.* *fiat infus.* in aq. *scrophul.* q. s. ad 5vj. *colat.* *adde syr. è pom.* *purg. mannæ Calabr.* *an.* 3jss. *sumat ad quantit. cochl.* vij. *sing. matutin.* cum debito regimine, augendo vel minuendo dosin pro ratione operationis. Rx aq. *scrophul.* 3ij. *syr. de meconio* 3ss. *sumat hora somni singul. noct.* post purgationes. This following Decoction was also prescrib'd. Rx *santal. alb.* 3jss. *citr. & rub. an.* 3ij. *ras. ebor.* 3j. *regul. antimonii* 3ij. *sarsap.* 3v. *infund.* in aq. *font.* 1bvj. *deinde adde rad. rufci* 3ij. *fol. millefol.* *agrimon.* *ling. cervina,* an *Mijj* *ciner.* *spong. combust.* 3vj *uvar.* *passul.* *enucleat* 3vj. *liquoritia* 3jss. *aq. recent.* 1blij. *coq.* *ad consumption.* *tertiæ partis,* & *fiat Colatura;* *adde mellis* q. s. & *clarificetur;* *bibat bis in die ad* 3iv. & *etiam pro potu ordinario cum cerevis.* ten. 2 *part.* in *pastu.* Rx *pulv. milleped.* 3jss *ceruss. antimonii* 3vj *Merc. dulc.* 3ij *Merc. vitæ Gr.* ij. *pulv. cort. citr. con-*
dit 3jss. *conf. euphrasiæ, beton.* *an.* 3ij *syr. è cort. citr.* q. s. *fiat Electuar.* Rx *resinæ jalapii* 3ls *amygd j.* *Merc. dulc.* 3ij. *Merc. vitæ Gr.* ij. *syr. è cort. citer.* q. s. *fiant Pilulæ num.* xij *deaurat.* *sumat num.* iij. *summo mane superdormiendo.* This was repeated every sixth Day. While she passed through this Course of Physick, Fontanelles were made under her Ears, and *Collyria* were applied *ex mucilag. sem. fænugræci,* &c. in aq. & lacte; also the Fomentation prescribed in the Method of Cure, and *empl. ad herniam* upon the Temples and Forehead. The *Struma* upon the Foot I designed to have taken out by Incision;

sion ; but I complied with their Desires, and applied a Caustick the whole Length of it, and divided the Escar ; then with a Caustick-stone rubb'd into the Body of the *Struma*, and dressed it up with Lenients and *emplastrum è bolo*, with Bandage over it. After the Escar separated, I rubb'd deeper into the *Struma*, till I came near the Basis of it ; then, in Consideration that it lay upon the *Periostæum*, I dressed it with *Merc. præcipitat.* upon Dossils of Lint, till I had digested it all out ; after which I lett off the Use of the Dossils, and suffered the Ulcer to incarn. By the Application of a Pledgit spread with *unguent. basilic. mag.* it contracted close in few Days, and cicatrized well. During the Time I was curing her Foot, the Defluxions on her Eye remitted, and the Ulcer cured by *aq. lap. calam.* and she returned to her Friends. But I have of late heard that both her Eyes have been since frequently sore.

11. Observat. of Ophthalmia.

A Child of about four Years of Age, having been long diseased with the *King's-Evil* from the one Ear to the other, with sore Eyes and a swell'd upper Lip, was commended into my Hands. The *Strumæ* were many of them ulcerated, and the Parts about them fretted and inflamed by the Matter which was pent in by gummy hot Plasters which had been applied to them. His Head was also ulcerated under an Emplaster that had lain long upon it, and his Eyes almost blinded by the Defluxion of a hot Rheum ; by means of all which the Child was much emaciated. I dressed the ulcerated *Strumæ* with Pledgits spread with *unguent. diapompholyg.* applying *cerat. Galeni* over them, and clipt the Plaster off his Head ; and after I had cleansed it of the crusted *Mucus* with which it was cover'd, I bathed it with Wine wherein were boiled *flor. ros. rub. summitat. absinth. balauſt. nuc. cupress. & bacc. myrtill.* then bound a Compress dipt in the same upon it ; by which in a Day or two it dried up. To his Eyes I applied a Fomentation, and an anodyne *Collyrium ex latte mulier. & aq. ros.* was dropt into them. Emplasters *ad her-niam* were applied to his Temples ; I embrocated his Lips with *unguent. refriger. Galeni*. I also prescrib'd him a distill'd Milk, with Antistrumaticks, and purged him with Rhubarb-drink ; also a few Grains of *Merc. dulcis* once in three Days. At other times he drank a distill'd

distill'd Milk, Water with new Milk, and some Nights an Emulsion *ex sem. 4 frig.* By this Method his Eyes recovered, the Ulcerations healed, and at length the Glands resolved, by the use of the *Malagma ad strumas*, or suppurated and wasted themselves that way, and he recovered Flesh. But this Child was of an ill Habit of Body, and frequently relapsed or fell into other Diseases; the Cure of some of these indisposed Bodies being the Work of Time.

A Child of about 11 Years of Age had been long diseased with Inflammations of her Eyes, with other Disturbances from acid Humours. After various Endeavours to cure her, she was at last, with much Despondency recommended into my Hands. I applied Emplaisters *ad kerniam* to her Temples, and prescribed her a Fomentation to breath forth the impacted Humours, and a Solution of *lap. calaminaris in aq. fenniculi* to wash her Eyes. The next Day I purged her with *infus. senæ rhab. &c.* and sent her half a Dozen Papers of a few Grains of *Calomel. cum saccharo*, with Directions to take one every three, four, or five Days. From her very first Dose the Fluxion ceased, she recover'd, and continued so some Months, and is relieved thereby constantly. But lately she was seized with a Pain in her Right Ear, and many small *Strumæ* arose on both Sides of her Neck, which I remov'd by purging, and by embrocating it with *unguent. ad strumas*.

These Inflammations of the Eyes are generally attended with *Lippitudo*, and are called so by the Latins; but that which I here mean by it, is a Blearedness of the Edges of the Eye-lids; of which there are two Sorts, *Lippitudo humida*, and *sicca*. They are both the Effects of great Defluxions excoriating the Lids, and relaxing the Tone of them. The *Humida* is more remarkable upon Accidents of burning by Fire, Gunpowder, or the like; but that which I shall here speak of, is a *Lippitudo*, with an *Hypersarcosis* which ariseth upon the excoriated Lid, and turneth it outward, being always accompanied with Fluxion upon the Eye. The *Lippitudo Sicca* is an Excoriation of the Lid, but ariseth from a salt Phlegm, mixed with a bilious Humour, and lieth upon the *Cilia* amongst the Hair, with a branny white

12. *Ober-*
var. of
Ophthal-
mia.

LIPPI-
TUDO.

Humida.

Sicca.

white Scale, not much unlike an *Elephantiasis*, and is attended with an Itching. I shall give you an Instance of each.

1. Obser-
vat. of
Lippitudo
humida.

A Man of about 56 Years of Age, of a full Body, had been subject to a *Lippitudo* of both Eyes some Months. I fomented them with *decoct. euphrasie, salviae, beton flor. ros. rub.* &c. and after I had cleansed them of the mucus, I touch'd them daily with *tinct. vitrioli dulificati* lightly; and prescribed him some of the *aq. viridis* set down in the Chapter of *Ægilops* to drop into his Eyes at other times; by which Method he was cured.

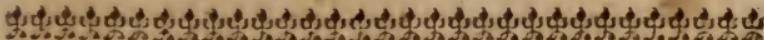
2. Obser-
vat. of
Lippitudo
humida
with Hy-
persarco-
sis.

A Man aged 28 Years, of a tolerable good Habit of Body, came to London with a *Lippitudo* on the lower Lid of his Left Eye, over-grown with an *Hypersarcosis*, arising from within, over-spreading the Tunicle, and heaving it outwards. Dr. Walter Neeaham was his Physician, and prepar'd his Body by purging, &c. In order to my Work, I placed him in a Chair in a clear Light, and turned the diseased Lid more outward, the while bringing the upper Lid close over the Eye, and holding it so whilst I rubb'd the *Hypersarcosis* with a Caustick-stone, wiping the Salts away as they dissolved with armed Probes. After I had thus extirpated the over-grown Flesh, I clipt off the loose Sloughs; and with a Sponge dipp'd in a Bason of Water, I washed the lixivial Salts out of the Escar, dropping into his Eye *mucilag. ex sem. althææ, psyllii & cydonior.* extracted in *aq. plantag.* then laying him upon his Back, I covered over the external Parts with Whites of Eggs beaten with a Piece of Allum to a Froth, and thereby restrained the Fluxion. After the Escar separated, I rubb'd the remaining Super-excrecence with a Vitriol-stone, washing the Salts out afterwards with fair Water. During this Work he was let Blood, and frequently wash'd his Eye with a Solution of *troch. alb. Rhafis* and *aq. plantag. & solani.* Thus in the Space of three Months it was extirpated and cured, the Eye-lid returning naturally as the other.

3. Obser-
vat. of
Lippitudo
sicca.

A Man of about 26 Years of Age, having been afflicted from his Infancy with sore Eyes, consulted Sir Francis Prujean, who sent for me. The Patient had a certain Blearedness of both the Left Eye-lids from the external *Canthus* downwards, but more especially on the lower

lower Lid; which Blearedness was covered with small white branny Scales investing the Hair. His Physician purged him with an *infus. senæ, rhab. &c.* and prescribed a Fontanel behind that Ear; also Venæsection in that Arm, which was accordingly done. I fomented the Diseased Parts with a Decoction of *summit. malvar. violar. flor. sambuci, méliloti, sem. lini & fænugræci*, and anointed them *cum ol. vitell. ovor.* at least twice a Day. By this the dry Scales were supplied, and after pick'd off from the Hair and Edges of the Eye-lids. Then I touched the bleared Edges with *aq. viridis*, and anointed them with *unguent. tutiæ*, as it is described in the *Pharmacopæia Londinen sis*; by which, and internal Prescriptions, he was cured.



C H A P. VI.

Of Ægilops.

AÆgilops is a Tuberclie in the inner *Canthus* of the Eye, either Scrophulous, Atheromatous, or of the Nature of a *Meliceris*, or sometimes with Inflammation. It hath obtained Two Names amongst the *Grecians*; viz. *Anchylops*, when it is not ulcerated; *Ægilops*, when it is. In which latter Case it is very apt to grow sinuous; and being so, whether it prove callous or not, is however called *Fistula lacrymalis*, sometimes passing through the Bone of the Nose itself.

The *Causes* of *Ægilops*, are the same that produce the *Causes*, like Tumours in other Places. But in some Cases it is made by Fluxion, and appeareth first as a small *Phlegmon*. This Disease frequently occurreth in *Lues Venerea*: But these I here treat of are Strumous.

If it be *Struma Atheroma*, &c. it is then made by *signs*. Congestion, and the Tuberclie is round, without discolouring the Skin. If it be made by Fluxion, Pain, and Redness do appear, with Inflammation over all that Eye. Sometimes it beginneth only with a Weeping of that Corner, and is not discovered till it affects the Eye with

Redness, and then, by Pressure with your Finger upon that *Canthus*, a mixt Matter may be discharged, Part whereof is not unlike the White of an Egg. Sometimes this Matter eateth quite through the Bone, and dischargeth itself downwards through the Nose with a foetid Smell.

Prognostick.

Fistulae Lacrymales are difficult of Cure from what Cause soever they arise. The Part being loose and spongy, the Eye very sensible, and the Laxity of the Part, maketh Humours apt to soak into it, and to penetrate even to the Bone itself. The Sensibleness of the Eye renders it subject to Pain and Fluxion, as also unfit to be dressed with sharp Medicaments, such as these Diseases require.

That *Fistula* which is recent, with sufficient opening, is the easiest of Cure. Those of a long Continuance are for the most Part accompanied with Ulcerations of that Gland, and *Caries* in the Bone, which makes them subject to a Weeping, after they are cured. If the Ulcer be accompanied with Erosion, it will be apt to terminate cancerous; in which Case the Cure is deplorable.

Cure.

The Indication of *Cure* is taken from the Condition of the *Ægilops*, whether it be in its Beginning with Inflammation, or by Congestion, passing its Matter forth under the *Cilium* into the Eye: In which Case it is fistulated. *Anchylops* hath also its peculiar Way of Treating, as other Tumours of the Glands.

In the Beginning of *Ægilops*, bleeding by Lancet is necessary, and so is Purging, also such Alteratives as have been prescribed in the general Cure of *Strumæ*, with Regulation of Diet accordingly.

Externally we apply Repellents to the diseased Part, to prevent Fluxion, of *aqua portulac. lactucæ. plantag. equiseti. solani. sperm. ranar. &c. cum albumin. ovor. bolo Armen. &c.* To intercept the Matter we apply *gum. mastich. takamakaka. emplast. ad berniam*, to the Temples and Parts about. If the Tumour increase with Tension and Pain, it will then be reasonable to endeavour Discussion by Medicaments already described in *Ophthalmia*, of *summitat. absinth. flor. sambuci. ruta. far. lentium. orobi. &c.* decocted in Wine or common Lixive. In the *Anchylops*, rancid Nuts beaten and applied

are

are much commended: So likewise is *calx viva cum melle contrita*. If the Tumour tend to Suppuration, then hasten Concoction *cum radic. lilior. mucilag. sem. althææ, fænugræci, lini, far. tritic. axung. porcin. &c.* The Matter being well concocted, lay it open large, that you may have Way to apply your Medicaments. Authors have proposed various Escaroticks to open these; but I use the opening them by Knife or Caustick. The only Caution is, that you open it such a Distance off from the Edge of the Eye-lid, that you divide not that; for in so doing you will leave a remediess Blemish, and the Eye will be apt to water ever after, and be subject to Fluxion: Therefore if you open it by Caustick, it will require your greater Care. I, for the most Part, open them by Incision: Then digest them with a Dossil dipt *in oleo ros. & vitell. ovi*; over which apply *cerat. Galeni*, or such like Anodynes, with a Compress dipt in some of the abovesaid distill'd Waters, to temperate the Heat in the Part; and afterwards deterge with *mel. ros. syr. de ros. siccis*; or, Rx *mel. comm. ʒij. viridis æris ʒj. spir. vini ʒiiij. coquantur ad tertiae partis consumptionem*: And then dispose them to cicatrize with this; Rx *myrobalan. citr. ʒj. thuris, myrrhæ, an. ʒij. floris æris ʒj. camphoræ gr. ij. infund. in aq. ros. & vini albi an. ʒiiij. & coquantur ad tertiae partis consumptio nem, filtrando pro usu*. And afterwards by *unguent. tutiæ, aq. calcis, &c.* with good Compression incarn and cicatrize them.

If it be fistulous, and the Orifice small, dilate it with Gentian Roots, or such like, and proceed with Deter sives, as hath been seen. If thereby the *Callus* do not waste, you may inject this following Decoction: Rx *fol. rutæ, chelidon. min. agrimon. an Mls. infund. per noctem spir. vini tbs. coletur pro usu*: And apply this following upon Dossils; Rx *zinziberis ʒij. viridis æris ʒij. mell. ros. ʒij. aceti opt. ʒiiij. coq. ad crassitatem*. If there be *Caries*, apply this: Rx *vitrioli nsti, cantharid. absciss. alis & capitibus, calcis vivæ, salis armoniac. alumin. roch. an. p. æq. cum urina pueri inspissat*. These are the Medicaments proposed by Authors of good Authority.

In the applying them, the Parts about must be well defended, and the Fluxion restrained by the Application of Refrigerants; and after all, it is a most painful tedi

ous Way. Therefore I propose the Use of the actual Cautery, which being applied through a *Cannula*, will, with one Touch waste the Callosity and *Caries*: After which dress it up with a Dossil dipt in a Mixture of *ol. ros. cum albumine ovi*, and a Compress in the same over all: Then digest and deterge with the milder Prescriptions, keeping the Orifice dilated, with a Dossil dipt in *tinctura myrræ*, &c. till the Bone exfoliate: Then with *unguent. tutiæ*, &c. with Compression cicatrize.

The *Anchylops* requires Extirpation, and is to be cured accordingly to what is proposed in this Treatise.

1. Observation of
Ægilops with Inflammation.

A Young Gentlewoman, abounding with acid *Serum*, was seized with an Inflammation and Tumour in the great *Canthus* or Angle of her Eye. She had been dressed by some neighbouring Friend till the Inflammation closed up her Eye-Lid, and alarm'd her by the great Discharge of a mixt serous Matter. I, observing the Tumour perfectly suppurated, and the Matter shining under the *Cuticula* ready to burst through, open'd it by the Point of a Lancer, without drawing one Drop of Blood. The Matter discharged, I dressed it with a Dossil dipt in *vitello ovi*, with a Plaster of *cerat. Galeni*, and Cloths dipt in red Wine over all, with convenient Bandage to retain them on. The next Day I took off the Dressings, and fomented it with *decoct. fol. malv. viol. beton. salviæ, & flor. ros. rub.* in Wine and Water, repeating the Dressings as before, and let her Blood in the Arm. At the next Day's Dressing I found the Swelling of her Eye-Lid relaxed, and the external Inflammation mitigated, but the Eye itself inflamed. I fomented and dressed the Abscfs with a Dossil, dipt in *syr. de ros. siccis*, applying a Pledgit of *unguent. tutiæ* over it, with a soft Compress thereupon; leaving the Eye at Liberty to be refreshed by the Air, and to be dressed with Breast-Milk, &c. as they pleased. To the Forehead, Frontlets were applied to restrain and intercept the Influx. Fir *Francis Prujean* was her Physician, and prescribed her lenient Purgatives, traumatick Decoctions, &c. I also kept the Orifice open sufficiently, for Discharge of the Matter, and Conveniency of Dressing, applying externally refrigerant and exsiccatant Medicaments, and adding a few Drops of *tinctura viridis* to the

Book IV. Of Ægilops.

28

the Syrup in which I dipt my Dossils. Yet notwithstanding our Endeavours, the Matter having made its Passage into the Eye, during the Time of Suppuration, it continued its Course, and flowed both Ways in too great a Quantity for some Time. Upon which Consideration, I dressed the Ulcer with a Dossil dipt in *Præcipitate*, and applied over it a Pledgit *cum unguent. tutia Vigonis*, with Compress and Bandage. After I had thus digested it, I dressed it with a Dossil dipt in *aq. Viridis*, (as it is prescribed in the Method of Cure,) lessening the said Dossil daily, and at last cicatrized it firm.

A scrophulous Child of about four Years of Age having an inflamed Tubercl^e in the great Angle of her left Eye, the Matter being suppulated, I opened it by Incision, and discharged a well concocted Matter; then fomented the Tumour with Wine, and fill'd the Abscess with Dossils dipt in *syr. de ros. sicc.* with a Pledgit of *unguent. basilic.* over it, also a Plaister of *cerat. Galeni* over that, and bound it up, proceeding daily in the Fomenting and Dressing it, till the Inflammation and Swelling remitted. After which, I added a few Drops of *tinctura viridis* to the Syrup, and kept the Ulcer dilated with a Dossil dipt and pressed out of that Mixture, applying a Pledgit of *unguent. ex lap. calamin.* with Compress and Bandage over it. And the better to dispose the Ulcer to cure, I purged her once in four or five Days with an Infusion of Rhubarb in Small-Beer, and once a Week with a few Grains of *Mer. dulc. cum saccharo.* The Matter diminishing, I lessen'd the Dossil, and cicatrized it with the aforesaid Tincture, making good Bandage upon the *Sinus*, till it was close united, and ceased weeping.

A Gentlewoman of about 25 Years of Age, having been between three and four Years subject to the King's-
Evil, and a *Fistula* weeping into the Eye from the great *Fistula la-
Canthus*, I prescrib'd her *aq. lap. medicament. Crollii to crymalis.* drop into that Corner of her Eye, and directed her the making a constant Compression upon the external Parts by an Instrument made to that Purpose; by which she was in few Months cured. And by the same Way, with the Help of Internals, I have cured many of those,

where the Bone hath not been carious, or the Habit of Body extreamly indisposed.

4. Observation of Fistula lacrymalis.

A Boy about seven or eight Years of Age, of a very ill Habit of Body, had also been two Years diseased with a *Fistula lacrymalis*, and consulted some of our Profession. But they deterr'd him and his Parents with the mention of the actual Cautery: Whereupon he was put into my Hands to cure. I made Incision into the Cavity, and put into it a proportionable Piece of Gentian Root, with a Pledgit of *Basilicon* over it, and a Compress pressed out of some of the afore-mention'd distill'd Waters. The second Day after I repeated the same manner of Dressing, and continued to keep it dilated with some of the same Roots. During which I endeavour'd to restrain the Influx of Humours, and dry up those affecting the Part, according as hath been set down in the Method of Cure, and by Antistrumaticks disposed the Humours to a healing Condition. The Fluxion being thus removed, and the Matter little, I left off the Use of the Gentian Root, and dressed the Ulcer with Dossils dipt and pressed out of *aq. med. Crotilii*, and after some Days lessen'd them daily. Afterwards I left off the Dossils, and cicatrized the Ulcer with Pledgits of *unguent. tutiae*, &c. Many such I have so cured; but some Years after, I have seen divers of them thus cured, weeping again.

5. Observation of Fistula lacrymalis.

A Girl of about 12 Years of Age, having a *Fistula lacrymalis* of some Years continuance, discharging a mixt crude Matter daily into the Eye, I laid it open by Incision, dilated and digested it, and endeavour'd by Internals to dispose the Body to a better Habit, and prosecuted the Cure by Exsiccants. But it not yielding thereto, I separated the *Periosteum* from the Bone, made Exfoliation of it, and incarned upon that, supposing I had by Compression cicatrized the Ulcer. But it broke out again upon the leaving off the Bandage; upon which I dilated it again, and by actual Cautery consumed the *Callus* and Bone, after which it cured more easily.

6. Observation of Fistula lacrymalis.

A Gentlewoman aged about 38 Years, had a *Fistula lacrymalis*, discharging its Matter into the Eye, in great Quantity. I applied a small Caustick upon that Part of it where I felt the Cavity; and having eaten into it,

it, I passed an actual Cautery through it to the Bone, whereby I cauterized it, then dressed the burnt Escar with Lenients to hasten its Separation, and afterwards deterged and cicatrized the Ulcer, as hath been afore shewed.

A young Fellow, aged 28 Years, was commended to me out of the City, having a *Fistula lacrymalis*, discharging a great Quantity of purulent Matter into the Eye. He had suffer'd many Years by it, and passed through many Hands unsuccessfully. I laid it open by Incision, and dilated it, endeavouring some while to digest it, and to that Purpose prescribed various Internals; but the Matter rather increasing, I passed a *Cannula* into the Cavity, and with an actual Cautery pierced through that Side of the Bone of the Nose, thereby diverting the Matter, and afterwards cured the Ulcer with more Ease; the Bone also exfoliated, and fill'd up with *Callus*.

I could give you more Instances of the Cures of *Fistulae lacrymales*; but the Manner thereof differeth not from what hath before been said; and by the actual Cautery I never failed in the Cure of the worst of them.

A Woman aged about 30 Years, having a Tubercl^e in the great *Canthus* of the Right Eye of the Bigness of a Pistol-Bullet; I made Incision of the Skin, and separating it from the preternatural Body, I raised it up. In taking it out, the *Cystis* broke, and shewed itself by its Matter to be a *Meliceris*. I cleansed the Wound, and cut it out, bringing away the *Cystis*; then closed up the Lips of the Wound, and applied a Pledgit of *unguent. basilic.* with Bandage over it, and cured it by Agglutination. These Tubercl^es do frequently yield to Discutients; and sometimes, after they have resisted all our Endeavours, they have of themselves resolved. Particularly I saw it in an Ensign in the *Low-Countries*, who was troubled with a Tubercl^e of the Bigness of a Pigeon's Egg, which had been of many Years continuance. He intended to have been my Patient there, and some Years after design'd to have put himself into my Hands here: But a while after it dissipat^ed so, as there remain'd no Mark of it.

7. *Observation of Fistula lacrymalis.*

9. Obser-
vation of
Anchy-
lops

A young Gentlewoman came to London, recommended to me, having a Tuberclie in the great Angle of her Right Eye, of the Bigness of a Lupin. Many En-deavours had been used in the Country to resolve it. I began with Discutients, Bleeding, Purging, &c. and thought I had thereby dissipated the Matter: But after a few Days discontinuance of Topicks and Bandage, it appeared again: Upon Sight whereof, I open'd it by Incision, and discharged a Matter like the White of an Egg. I could not perceive any *Cystis*, yet judged it an *Atheroma*. Having dressed it with a Dossil dipt in *Præcipitate*, I applied another over it, spread with *Basilicon*, with a Compress over that dipt in *aq. ros. rub. & solani*. The third Day I repeated the same kind of Dressings, and continued them till I had well deterged and digested the Ulcer; then dressed it with a Dossil dipt in a *Sarcotick Tincture* of *Myrrh*, *Aloes*, &c. and afterwards proceeded with Epuloticks, and thought it had been cicatrized. But pressing with my Finger one Day upon the upper Part of it, and a disproportionate Quantity of Matter flowing forth, I passed in my Probe, and feeling the Bone carious, I dilated it with Gentian Roots, passed in a *Cannula* to the *Caries*, and with an actual Cautery dried the Bone. I applied to it *ol. ros. cum albumine ovi*; and afterwards dressed the Ulcer daily for the first four or five Days with Dossils dipt in *decoct. hordei, rad. consolid. maj.* and when the Anguish was mitigated, with *tinctura myrrhae*, keeping the Orifice open, till the Exfoliation was perfected; then cicatrized it, as hath been shewed in the former Observations.

10. Obser-
vation of
Anchylops
with a Po-
lypus.

A poor Woman came to me out of the Country, with a large Tuberclie on the Right *Canthus*: She had also a *Polypus* in that Nostril. I began with the Tuberclie by the Application of a Caustick. After the Separation of which, a *Fungus* thrust forth, and grew very vexatious in the eradicating. After I had spent some Time unsuccessfully in the Work, I began with the *Polypus*, attempting to thrust it out with my Finger: But it not yielding that Way, I took hold of it with a *Forceps Ducks Bills*, and having pulled it outward, I passed a Needle with a twisted brown Thread through it, according to *Fab. ab Aquapend.* and pulling by that and

and my *Forceps* together, it came away about the Length of two Inches, but was attended with a Flux of Blood from the Nose, Mouth, and Eye; which was stopt by the syringing up of Oxycrate. At the next Dressing of the Ulcer in the *Canthus* I missed the *Fungus*, and found a great Hole in the Bone of the Nose. Upon Sight of which, I concluded the *Fungus* which had been there, was the Root of that *Polypus*. The Bone was much corrupted: but I hasten'd the external Cure of the Ulcer, and return'd her into the Country, leaving the Exfoliation of the Bone to Nature.

Having treated accidentally of a *Polypus*, I thought myself obliged to give you one Observation of an *Ozæna*, it being an Ulcer within the Nose; and though it be not the King's-Evil, yet it too frequently accompanieth it, and is occasion'd by those sharp Humours passing that Way, and yieldeth not otherwise to Cure than by the general Method prescribed in this Treatise.

A young Gentlewoman, aged about 15 Years, of a lean dry Constitution, was diseased with an *Ozæna* in *vation of* both her Nostrils, a thick upper Lip, and some Glands *Ozæna*. on both Sides of her Neck. She was put into the Hands of Dr. Barwick and myself. He prescribed her as followeth. Rx sen. oriental. 3ij. Rhei opt. incis. 3ss. pulp. tamar. 3ss. syr. è pom. purg. & mann. opt. an. 3v. infund. S. A. in vini alb. 3iiij. Colatura, clarificetur cum ovi album. & propinetur mane ad 3iiij. cum regimine. Singulis noviluniis & pleniluniis sumat Calomel. gr. xij. diacryd. sulphurat. gr. vj. in formam Boli redactor. cum conserv. viol. 3ss. syr. viol. tantillo. Rx ocul. canceror. Mercur. diaphoret. corall. rub. præparat. an. gr. iij. Misc. Capiat bis vel ter quotidie in cochl. i. lact. vacc. cum ascellis distillati, & superbibat cochl. v. vel. vj. cum sacchar. opt. dulcorat.

I began my Work with the moistning of the crusted Matter sticking in her Nostrils, by frequent injecting of this: Rx hord. mundati 3j. sem. althææ 3iiij. sem. cucurbit. melon. excortic. an 3ss. infund. & coquantur in aq. font. ad libss. coletur pro usu. After her Nostrils were herewith syringed, she snuft up a little ol. amygd. dulc. Her upper Lip and Neck were embrocated with unguent. ad strumas Morning and Evening. After her Nostrils were freed of that crusty Stuff, this following

Errhinum

Errhinum was snuft up into her Nostrils twice a Day at least: Rx fol. plantag. summitat. equiseti, an. Mj. rad. bistortæ, tormentillæ, an. ʒj. flor. ros. rubr. Ms. balaust. ʒij. coquantur in aq. chalybeat. ad libij. Colaturaæ adde syrup. nostrí mag. as it is prescribed in the Cure of Ozæna in the Treatise of *Lues Venerea*. The Edges of her Nostrils were anointed with *unguent. refriger.* Galeni cum ceruss. antimonii. By the frequent repeating of the afore-mention'd internal Prescriptions and external Applications, she was happily cured in the Space of a Month, and so continues to this Day. And by this Method, all these Kind of Ozæna may be cured.

The Eye-lids are frequently diseased with glandulous Tuberclæ; which, how different Matter soever they contain, are generally called *Hordeoli*, and do take their Original from the same Matter that those Tumours do, which are described in this Treatise of *Strumæ*, and are cured after the same Manner. Sometimes they resolve or suppurate; but for the most Part they are taken out by Knife or Caustick. These only that lie between the inner Tunicle and Cartilage are capable of being extirpated by Incision: The other may be eradicated by Caustick: The Manner I shall shew you in a few Instances:

**Ex. 2. Observation of Hordeo-
lum.**

A Gentleman of about 26 Years of Age, had an *Hordeolum* on his Right Eye-lid, lying between the external Tunicle and Cartilage. I applied *emplastrum ad strumas* on it, with Hopes of resolving it: But after some Time it suppurated. I thereupon opened it with a Lancet, and let out the Matter; then digested it with *unguent. Basilic.* But feeling afterward some Part of the Gland in it, I sprinkled into it some *Merc. præcipit.* and applied a Pledgit of *Basilicon* over it, with *emplastr. diaethyl. simpl.* whereby I eradicated it, and soon after healed it smooth with *unguent. tutiae*. Where the Suppuration hath been more perfect, they're easier cured. In others, where they were hard and moveable, I have open'd them by Incision transverse, or according to the Length of the Eye-lid, and thrust them out whole, then healed them by Agglutination. Yet in some of these the *Cystis* hath burst in taking out, and a thick curdled Matter hath thrust forth: In which Cases I digested them out with *Præcipitate*, and healed them as aforesaid. But the opening

opening these with a Caustick-stone pointed is most grateful, to Women at least : Upon which Consideration I generally open them that Way, and upon Separation of the Escar thrust them out, and cure them by Digestion with little Trouble or Pain.

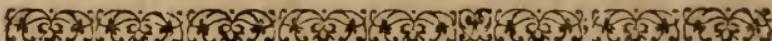
A young Woman came out of the North Country 13. Obsr^d to me, with an *Hordeolum* on the Inside of the Cartilage, pressing upon the Eye with great Weight, and in-flaming it. I turn'd the Lid inside outward, made an Incision into it, and thrust it out : Then cleansing the Wound, I return'd the Lid down. It cured of itself in three or four Days, without any manner of Dressing. Yet sometimes Excrescences thrust out there, and inflame the Eye. Sometimes I have seen Excrescences of soft Flesh grow upon the *Tunica conjunctiva*, and cause an Inflammation of the Eye. Several such like have come to me out of the Country ; some I have cut away with Scissars; others I have worn off with the Allum and Vitriol-stone.

A Person of Honour, aged 29 Years, was commend-ed into my Hands by Sir Edward Alston, Physician. 14. Obsr^d She was diseased with a Tumour of a dark red colour, Sarcoma possessing the upper Lid of her Left Eye, between the external Tunicle and the Cartilage, spreading to the very Supercilia, Edge of the *Cilium*. It took its Original from some *Hordeolum* ill handled, and seem'd to be a *Sarcoma*. I propos'd the eradicating it by Escarotick ; which being allow'd of, I encompassed the Tumour with Ink, then began with a Caustick-stone in the upper Part of it, wiping up the dissolved Salt with armed Probes, proceeding gradually in the Work to the very Edge of the Lid, with great Care to preserve the Hair growing on it. It was a very nice Work. After I had sufficiently penetrated into this fleshy Body, I washed the Salts out of the Escar, and scarifying it, dressed it with *unguent. basilic. cum oleo lilio*, and bound it up. The next Day we met again ; when I took off the Dressings, and found the Tumour flat, the Escar lying proportionably, as was design'd, and the Eye undisturb'd. I fomented *cum decoct. malva, viol. &c.* and dressed it up as before, continuing my Attendance daily with her Physician ; and as the Escar separated between the Scarifications, I either rubb'd the Super-excrence of Flesh with

with the Vitriol-stone, or sprinkled it with Præcipitate, or used both. And after the Escar cast off, I deterged and wasted the remaining *Basis*, and cicatrized it smooth, leaving the very Edge naturally shaped, without the Loss of one Hair, and so it continueth to this Day.

15. Observation of an Excrecence upon the Larymal Gland. An Italian Gentleman was brought to me by Sir *Theod. de Vo*, who had a large Excrescence in the great Angle of his Right Eye. The Extirpation had been attempted both in *Italy*, and at *Paris*, as they told me. I passed a Ligature upon the *Basis* of it, and clipt it off close; then drying up the Blood with a Sponge dipt in *aq. sperm. ranar.* I rubb'd its remaining *Basis* with the Vitriol-stone, then washed his Eye again with the aforesaid *aq. sperm. ranar.* The next Morning I visited him, and met his Physician there; but we saw nothing of the Excrescence remaining, neither did it appear any more.

16. Observation of Thymus. A Gentlewoman near 40 Years of Age had a very large *Thymus* growing upon the Side of her Nose, over the great *Canthus*. It was of many Years growth; and she had been advised not to permit the Extirpation of it. But she at length desiring me to take it off, I passed a Needle under its *Basis*, and cut it out, cicatrizing it afterwards with Epuloticks, and it grew no more.



C H A P. VII.

Of the Tonsils.

THE *Tonsils*, or Almonds of the Ears, are also frequently swelled in the *King's-Evil*; which Tumour may be very well reckon'd a Species of it.

These Swellings are raised by Congestion gradually without Pain, and therefore are seldom taken Notice of, till by their Growth they bring Inconveniences with them; as Catarrh, Cough, or Difficulty of swallowing;

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lowing; in which latter Case, their Drink often runneth out at their Nose.

These differ from the common Swellings of the *Difference.* *Amygdala*, as Tumours by Congestion do from those made by Fluxion; which latter are of sudden Growth, and terminate as soon; whereas the other may have been many Years growing, and do increase and decrease with the Moon, as generally all Tumours by Congestion in the Glands do.

The Causes of the Tumefaction of these Glands are *Causes.* the same with those of *Strumæ*.

They are soft fleshy Tumours, of a round or oval *Signs.* Figure, retaining the natural Colour of the Skin, and are of an obtuse Sense, so that you may pierce the Body of them with a Knife or Probe, without causing Pain or drawing Blood: Yet are they subject to Inflammation, and the like Accidents that other Swellings of the Glands are.

If the Tumefaction be small, the Disturbance is lit- *Prognos-* *tick.* tle; many People having had them from their Infancy without great Inconvenience. If the Swellings be big, there may be Danger of Suffocation: But in that Case they may be extirpated, without running any great Hazard.

In order to the *Cure*, Physicians do generally pre- *Cure.* scribe Venæflection, and by Clysters and lenient Purgatives make Evacuation; also by Blistering, Cupping, Fontanelas, &c. they endeavour Derivation, which is necessary in Case of Inflammation; in which astringent Lotions may be also proper. But in those made by Congestion, the speediest Way of Cure is by Extirpation; and that either by Abscission, at once cutting them off, or by actual or potential Cautery. Modern Writers have said little of these Extirpations. *Fabritius ab Aquapend.* in his Book *De operat. Chyrurg.* renders the Abscission of them difficult enough, and not without Danger, as you may see, where delivering *Celsus* and *Paulus*'s Way of cutting them out, he determines at last thus, *Ex quibus licet colligere, neque facilem neque omnino tutam hanc Chirurgiam esse, &c.* The first Chirurgeon in my Memory that attempted the extirpating them, was the late deceased Mr. *Ed. Mol.* an excellent Operator. He attempted it upon a Person

Person of Honour by actual Cautery, through a *Cannula* well contrived for that Purpose. I afterwards saw him burn several. He passed the Cautery through the Body of them, and by repeating of it twice or thrice, he burnt a Hole through them, and accordingly crimped them up; as may be yet seen in that noble Person, somewhat of the Excrecence still remaining, and not without some Uneasiness at certain Times: Upon which Account I had the Honour to see it some Years since. The Way by potential Cautery is, by working with a Caustick-stone, and other Escaroticks fix'd in such an Instrument as may serve to eat into them, without offending the neighbouring sound Parts. To which Purpose, I make my way into the Body of the Gland, consuming it, within; and at last the Shell (or exterior Part) falls in Pieces, and is so radicated. The Way by Excision is, by making a Ligature about the *Basis* of them, and snipping them close off with a Pair of crooked Probe-Scissars. In this Work you ought to consider well how they are radicated. For sometimes they are rooted like a *Crista* deeper in the Throat: In which, if in cutting them out you only cut that Part you tied, and cut the Ligature at the same Time, it will slip down into the Throat, and hazard their choaking. Therefore whilst you hold the Ligature with one Hand, you must pass the Scissars down as close by the Basis of it as you can, so as by one Snip you may cut it clear off. But lest you should fail, it will be necessary to have another Ligature fitted in an Instrument for your Purpose, and the Patient's Head to be held steady, that in case you fail in the first Attempt, and it fall into the Throat, you may readily return it, and tie it at the same Time, which is no difficult Thing to do. The Excision made, the bleeding will be soon stopt by gargling with Oxycrate; and you may cicatrize it in a few Days, by touching it with the Vitriol and Allum-Stones. I shall give you some Instances of my Practice therein, and shew you my first Attempt in the Extirpation of them by Escarotick and Excision in this following Observation.

A Person of Honour, aged 10 Years, having been some Years diseased with preter-natural Swellings in her *Tonsils*, with great Defluxion upon her Lungs, also Difficulty of Breathing, and at last of Swallowing, her Drink frequently running out at her Nose, was brought to London, and put into the Hands of Sir Francis Prujean and Dr. Luke Rugely. Mr. Arris was Chirurgeon to the Family. Various Remedies had been prescribed, but they proving ineffectual to remove them, I was consulted, and proposed the Extirpation of them by actual Cautery. But that not being admitted, I undertook it by Escaroticks, and came the next Day prepared, and placed her in a clear Light, her Head leaning to a Bed-Post, Mr. Arris sitting behind, holding it steady. I began with the Left *Tonsil*, holding her Tongue down with a *Speculum Linguæ*, while I pressed into the Body of the Tumour with a long-pointed Caustick-stone fixed to a Stick. After I had held it a while, I pull'd it out, and with a Firr-stick dipt in *oleo vitrioli* pressed into the same Place, then pulled out that too, and gave her a Glass of Water to wash her Mouth. I repeated the Use of the several Causticks ; she washing her Mouth always after the Use of them. By this Method I penetrated into both the *Tonsils*, and divided the Left into two. In the Time of working with the Caustick, I dried up the Salts of them with armed Probes so well, that her Mouth was not fretted in any Part by them : And after I had finish'd the Work, I wash'd the *Tonsils* with *decoct. hordei*, and she afterwards gargled with a pleasant Julep made of distill'd Water, *acet. ros.* and *syr. diamoron*. Having divided the one *Tonsil*, and diminished the other, I caused an Instrument to be made to convey a Ligature about the Basis of them, with Design to tie and cut them off one after another. I began with the Left *Tonsil*, passing a Ligature upon the one half, and cut it off close. There happening no Disturbance by bleeding, I tied the other, and cut it off ; then with a Vitriol Stone I rubb'd the remaining Basis, and thereby smoothed and cicatrized it in four or five Days. I then began with the Right *Tonsil*. Mr. Arris holding her Head as formerly, I made a Ligature upon the Basis of it, and holding the

End

End of it with my Right Hand, I passed a Pair of Probe-Scissars with my other Hand, close by the said Basis, and supposing I had encompassed the Root, I clipt ; but it not coming away, I thrust my Scissars downwards, and cut again, being confident I had clipt through the fleshy Body. I pull'd the Ligature, but it not coming, I was somewhat surprized what should be the Cause: Therefore pulling my Scissars a little back, and turning them more off from the Basis, I clipt again, cut off the bigger Part of it, and brought it out with my Ligature; at which Instant she choaked. The Ladies seeing it, shrieked, and became troublesome. I desir'd Mr. *Arris* to sit still while the Patient choaked : She gaping, I passed into her Throat the Instrument I had made the Ligature by, and raising up the remaining Excrecence, she recover'd, and cried, *Shall I live?* I replied, *Yes, if you sit still.* I passed another Instrument fitted with a Ligature. In changing the Instruments, the Excrecence slipt down, and she choaked again, but I raised it up, and relieved her: then tied the Ligature upon it, and looked into her Throat, where I saw it rooted like a Cock's-Comb, and that in endeavouring to cut the *Tonsil* close by the Root, I had cut below the Part I had tied. Which if I could have foreseen, and have passed my Scissars close a little lower, one Snip had brought it clear away ; but not supposing it rooted so low, and working blindfold, I was at a loss. But being now better informed, I passed my crooked Probe-Scissars down lower, cut it clean off by the Roots, and brought it away with my Ligature. I cicatrized it with the Vitriol and Allum-Stones in few Days. Yet some while after she was cured, a Part of her Drink came out at her Nose; which happened by reason of the *Tonsils* drawing that Part of her Palate down lower than naturally it should; and I suppose that was the Cause of her speaking so. But some while after, she was freed of those Inconveniences.

2. Observation of the Right Tonsil extirpated.

A Gentleman aged 25 Years, who had been long subject to Defluxions, &c. from over-grown *Tonsils*, and taken much Physick unsuccessfully, was recommended to me. The Right *Tonsil* being very large, I proposed the cutting it off. The Patient's Friends consulted their

their Physician and Chirurgeon: They did not readily assent to it. But notwithstanding, the Patient and his Friends perceiving there was no other Way of Cure, they recommended him again to my Care. I made a Ligature upon it, with Design to have cut it off at that Instant; but observing their great Apprehensions of a Flux of Blood, &c. I deferred it till the next Morning; and then I saw it shrunk and much lessened. I took hold of the Ligature with one Hand, and passing my Probe-Scissars close by the Root of it, at one Snip cut it off, and brought it away with the Ligature, it scarce bleeding one jot. I rubb'd the remaining Basis with a Vitriol-Stone, and caused him afterwards to gargle with *decoct. hordei cum syr. de rosis scincis*, and in four or five Days cicatrized it. The other being small, I deferred the meddling with it, till there should appear more Cause. But from that Time he recover'd a better Health.

A Gentleman's Daughter of about 12 Years of Age, 3. Observation of frequently diseased with Catarrhs, and after some Time, with great Difficulty in swallowing, consulted me. Looking in her Throat, and seeing her *Tonsils*, especially the *Tonsil ex-*
Right, very big, I advised the cutting off the bigger. *the Right extirpated.*
To which they assenting, I made a Ligature upon it, and at the same Instant cut it off; and afterwards, by rubbing it with the Vitriol-Stone, cicatrized it in few Days. She being relieved hereby, hath hitherto deferred the cutting off the other.

A Gentlewoman of about 26 Years of Age, subject to Catarrhs, by reason of the preternatural Growth of the *Amygdalæ*, came to London, and consulted her Physician. He advised her to have them cut off, and brought me to her. I made a Ligature upon the one, and cut it off, washing her Mouth after with Oxy-cratae: Then passed a Ligature upon the other, and cut it also off; she gargled and washed her Mouth. I afterwards rubb'd the Basis of them with a Vitriol-Stone, and took my leave for that Time. The next Day I came again, with Intention to dress the remaining Wounds: But she was removed from her Lodgings, or her Physician had undertaken the cicatrizing them; for from that Time I neither saw nor heard from her.

5. Observation of
the Left
Tonsil ex-
tirpated.

A Gentlewoman aged 56 Years, had been a long while subject to Defluxions upon her Throat and Breast. After various Endeavours to divert this Humour, I was consulted. Looking into her Mouth, I saw the Left *Tonsil* very large, and supposed that the Cause of her Catarrh. I proposed the Excision of it: Which being approved of, I came the next Day, and made a Ligature about its Root, and with my Probe-Scissars cut through it, as was accustom'd. But it not coming away as it should, and the Blood flowing down her Throat, whilst she leaned her Head backwards, feeling herself choaking, she flung backwards, thrust away the Man behind her, and in struggling slipt off the Chair. At which Instant I lost my Hold of the Ligature, and she lay choaking. I saw the Cause, and getting hold again of the Ligature, reliev'd her, then raised her up, and having a little refreshed her with Drink, placed her again in a clear Light, and passing my Scissars down lower, with one Snip cut it off, and brought it away with the Ligature. She gargled with Oxycrate, and was in few Days cured by touching it with the Vitriol and Allum-Stones. Since that Time she hath not been troubled with Defluxions, but enjoys a good Health to this Day.

6. Observation of
both Tonsils
extirpated.

A young Gentlewoman of about 15 Years of Age, was brought to me out of a neighbouring Village, with both her *Tonsils* preternaturally swelled. She had been long subject to a Catarrh, and had been frequently in danger of Strangling in the Night with the Fluxion. I proposed the Excision of them, as the speediest Way, and least painful: But she not permitting it, I went about the Extirpation of them with Caustick Stones, and *ol. vitrioli*, interchangeably used. I began with the Right Side, which was the lesser *Tonsil*, and press'd my Caustick to the Middle of it: Then pulling it out, I press'd upon the same Place with a Stick dipt in *oleo vitrioli*: And so applied them interchangeably, (as I said.) Between while she gargled with Water, and took a Breathing-time. Then I proceeded again in the Work with Causticks. But it is not imaginable what a Disturbance I met with from a frothy *Saliva* filling her Mouth the while, to the very choaking of her. I wonder'd at it, but was told by her Mother, then standing

standing by her, that it was her Disease; and upon that Account, they had been directed to me as their last Refuge. At that Sitting I penetrated into the Body of the Gland, and eat it hollow, not unlike a Worm-eaten Nut. Having wearied her and myself, I washed out the Salts, and dismissed her. The next Day she came again, with it much diminished; the Middle of it had been consumed, and the Shell was contracted. I fell to work on the Fore-part near its Basis, and easily penetrating through the external Part, worked down the Edges afore me, and in three or four Sittings wasted the Gland so, that there remained only a Prominency in the Basis, which being raw, I consumed it by touching it with the Vitriol-Stone daily; to which Purpose I have them also fitted in Shafts, so as they cannot slip out, though they should break in the Use. Whilst this latter was cicatrizing, I began with the bigger on the Left Side, after the same Manner as hath been said of the former. But the Work growing tedious, by reason of the continual flowing of that spumous Humour, I concluded the Exirpation of that by Ligature and Scissars, and cicatrizing it with the Vitriol and Allum-Stones, dismissed her cured. Since which I have seen her often, and am satisfied that she is freed of the former Disturbances by the Exirpation of those preternatural Bodies.

A young Gentlewoman of about 16 Years of Age, ^{7.} *Observ-*
nearly related to a neighbouring Physician, came out of *vation of*
the Country, diseased as in the former Observation, *both Ton-*
with much the like Accidents of Catarrh, &c. attend-
ing. In viewing these *Tonsils*, observing some little Po-
rosity in them, I made search, and did easily pass in a
small Probe, without drawing any Blood, or causing
Pain. They were perfect *Fungi*, and required to be era-
dicated. I would have done it by Ligature and Scis-
sars: But it not being admitted, I proceeded by Cauf-
stick, as abovesaid; and not meeting with that Dis-
turbance from the *Saliva*, as in the former Work, I went
on more easily, and the sooner extirpated them. Since
when she hath been freed of the foresaid Disturbances,
and enjoys a good Health.

There also happeneth an Elongation of the *Uvula*,
through the Abundance of salivous Humour flowing

upon it: In which Case, if it touch upon the Root of the Tongue, or upon the *Epiglottis*, it causeth a frequent Hauking, and in progress maketh a vexatious Catarrh.

8. Observation.

Such was the Case of a Servant-Maid to a Noble Lady in the Country. Various Medicaments had been prescribed ineffectually: I being in that Family was desired to see her. Looking into her Mouth, I saw the *Uvula* hang dangling upon the Root of the Tongue. It was not swelled nor inflamed. I supposing it the Cause of her Distemper, took hold of the lower Part of it with my *Forceps*, and at the same Time cut it shorter with a Pair of Scissars. It did not bleed a Spoonful, and afterwards it cicatrized of itself without Application of any kind of Medicament, and she was thereby freed of the Defluxion. Such another I cut off, in a Servant of His Majesty belonging to *Hampton-Court*, and some others who were so afflicted, and thereby freed them of their Catarrh, when all other Remedies failed.



C H A P. VIII.

Of Ranula.

Description.

Ranula is a soft Swelling, possessing those Salivals under the Tongue. It is made by Congestion, and in its Progress filleth up the Space between the Jaws, and maketh a Tumour externally under the Chin.

Cause.

It is caused by a pituitous Matter (say Authors) & *Cerebro in Lingua prolapsa*. But late Discovery hath made it manifest, to arise from a Congestion of Humour, in the inferior salival Gland which is seated there, as I have already intimated.

Signs.

It is a soft Tumour without Pain or Alteration of Colour in the Skin. It yieldeth to the Impression of your Fingers, but riseth upon the taking them off, and containeth a Matter not unlike the White of an Egg, or

or such as we meet with in an *Atheroma*. It is also discovered by a Croaking in their Speech.

They are not dangerous as to Life, but are difficult *Prognostick.*
of Cure.

The *Cure* consisteth in the prosecuting the same *Me-*
thod which hath been proposed in the *Cure* of *Strumæ*.
Cure.
The Topicks ought to be discutient ; amongst which, all
the Sorts of Salts and Aromaticks, dissolved in conve-
nient Liquors, are proper to hold in their Mouths : viz.
R. piperis, zinziberis, an. 5j. sal. commun. & gemmæ an. 9ij.
origani, calamint. rad. ireos, hermodact. an. 3ls. mastich.
3j. Misc. & fiat Pulvis. These may be boiled in Wine,
or mix'd with Oxymel ; or the Tumour may be rubb'd
with the Powder. To the external Tumour you may
apply such Discutients as have been prescribed for *Stru-
mæ*. If by these Applications the *Ranula* do not dis-
cuss, you must open it by actual Cautery, and dress it,
as shall be shewed in the following Observations.

A Gentlewoman, aged 35 Years, came to me, re- *i. Obser-
commended by Sir Francis Prujean.* She had a *vation of*
large Tumour lying between her Jaws under the Tongue, *Ranula.*
and reaching to her fore Teeth, making a great Swell-
ing externally under the Chin. It caused a Croaking in
her Speech, and seem'd troublesome to her. She had
passed through a Course of Physick, and used various
Medicaments to it unsuccessfully. I proposed the let-
ting out the Matter by actual Cautery ; but she not
permitting it, I opened it by making an Incision on
each Side near the Tongue, and discharged about two
Blood-Porringers full of an albugineous Matter ; upon
which the Tumour sunk. I then made a Search with a
Probe, and perceived the Matter had not only made a
deep Cavity downward, but also render'd all the inner
Part of the Tongue hollow. I dressed the Abscess
with *syrup. de rosis siccis*, and applied *empl. ad berniam*
& Egyptiac. in decoct. salvie, beton. apii, &c. then in-
carnced and cicatrized it. But some while after it rose
again in a Tumour as formerly. Upon Sight whereof
I open'd it by actual Cautery on both Sides of the *Ra-
nula*, by which the Matter was again discharged, and

the Tumour wasted. During the Time I was endeavouring the Cure, she was purged, and put into an Antistrumatical Course of Physick, and was at last cured as aforesaid: Whether she relapsed afterwards I know not, having neither seen nor heard of her from that Time to this.

2. Observation of Ranula.

An old Gentlewoman came out of the Country to me with a long Swelling on each Side under her Tongue, of a fleshy Colour, which felt under my Fingers like the Gills of a Fish. They were not painful, but very uneasy to her. I supposed them to have Matter in them, and attempted to shrink and dry it up, as hath been proposed in the Method of Cure; but without Success. I then slit the one open the whole Length; but there flowed out only a florid Blood, which I stopt by washing her Mouth *cum aceto*: Then laid open the Tumour on the other Side. They cut like cartilaginous Bodies. I stopt the Bleeding of this, like as I had done the other, and dressed them both with an armed Probe, dipt in *tinctura vitrioli dulcificati*, designing to dry them up that Way. From the Time I open'd them, she complain'd of Hairs in her Mouth, and frequently endeavour'd with her Fingers to pull them out, and persuaded me to do the like: But I could feel no such Thing. She came to me daily to be dress'd. The Abscesses digested, but the Tumours would not sink: Wherefore I cut off their Lips; yet they did not lie so smooth as I design'd. Upon which Consideration I would have burnt them by actual Cautery: But the mention of that so terrified her, that she came no more to me. I have inserted this Case for the Rarity of it, and am confident the actual Cautery was the proper and certain Way of Cure.

3. Observation of Ranula.

A young Fellow was commended to my Hands, who had a painful Tubercl^e in his Tongue. I made Incision into it according to its Length, and thrust out a Stone bigger than a small Olive. I dress'd the Abscess with *syr. de rosis siccis*; and thereby cured it in few Days.



A
T R E A T I S E
O F
W O U N D S.

The FIFTH BOOK.

C H A P. I.

Of WOUNDS in general.



WOUND is a Solution of Continuity *A wound* in any Part of the Body suddenly made, *defined*, by any Thing that cuts or tears, with a Division of the Skin.

This *Definition* differs much from what is usually deliver'd by Authors; and it is fit it should. For they generally defining a Wound by a Solution *in parte molli*, do thereby exclude a Cut

made into a Bone, as that into the *Cranium* by a Pole-Axe, &c. which why it should not be called a Wound I know not. I say, it is made by any Thing that cuts or tears. Other Authors define it to be made by an external Instrument, &c. How then do they call that *fracturam cum vulnere*, a Fracture with a Wound, where the Bone from within makes the Wound, and thrusts itself quite through the Flesh? *Sennertus* adds to his Definition, that it be done à re secante & acuta: Yet he reckons those for Wounds that are made by Bullets, although it be Cannon-Shot. I do therefore think it fit to make my Definition more comprehensive, and to take in whatsoever makes a sudden Solution of Continuity, at least immediately and by itself, on what Part soever it lighteth. So a Cut into a Bone is a Wound: Tearing the Flesh, Nerve, Sinew, Tendon or Cartilage, by Bullet, Stone, Splinter, &c. is a Wound. Only I add this Restriction, that the Skin must be likewise divided: By which last Words I exclude Fractures that come not through the Skin, and Contusions if the exterior Parts be continuous. But by the Word Skin I understand not only the external *Cutis*, but also the inward Membranes of the Gullet, Ventriicle, Guts, Bladder, *Urethra*, and Womb; all which are capable of Wounds from sharp Instruments, either swallowed, or thrust into them.

Difference of Wounds. A Wound thus defined admits of many Differences, of which I know none that can be properly called essential. Great or small, deep or shallow, wide or narrow, straight or crooked, round or angular, are but accidental Differences. Distinctions taken from the Weapons, whither sharp or blunt, Sword, Rapier, or Bullet, Cut, Prick, or Tearing, are likewise but accidental. Those that look most like essential Differences, are they which are taken from the Subject, in which the Wound (which is itself but an Accident) inhereth, viz. from the Flesh, Skin, Brain, Nerve, Tendon, Artery, Vein, Gristle, Bone, &c. All which being the several Subjects of Wounds, may well be allowed to specify them; and so much the rather, because from the Nature of them we raise our greatest Indications of altering the Method of Cure. To this Head may likewise

likewise be referred the Division of them into Simple or Compound.

Wounds are in themselves so visible, that they need *signs*, no general Marks to be known by. But the peculiar Affections of the particular Parts hurt, and the Methods of discovering what inward Part is wounded, by Observation made of the Symptoms that happen, are fully handled in those Chapters which treat of the Wounds of the several Parts.

The *Prognosticks* are there also delivered, that the *Prognosticks* young Chirurgeon may be informed how to make Judgments of them, and avoid the engaging himself in promising a Cure of such Wounds as are mortal. The greater Symptoms of *Gangraena*, *Paralysis*, and *Spasmus*, I have translated to *Gun-shot Wounds*, they being there more frequent and usual. *Hæmorrhagiaæ* are spoken of in this present Treatise.

The Wound being a Solution of Continuity, doth *Intentions of Cure*. require to be made one again, Unity being the Perfection of whatsoever hath a Being. To effect this is the Work of Nature and Art; both must mutually join their helping Hands; and unless both the vital Faculties and Nourishment of the Part do assist the Art of the Chirurgeon, it will be lost Labour: Here must be a joint Meeting and Agreement of all in one.

In Simple Wounds the Chirurgeon is to afford his Assistance five manner of Ways; the omitting of any of which will render him negligent or ignorant in his Trade.

The first is, in careful and diligent taking away all such extraneous Bodies as by their Interposition may hinder the true Agglutination of the disjoined Parts, whether they be concrete Blood, Hair, Sand, Dust, Pieces of Bones, Cartilages, or Pieces of the Weapons, Rags, &c.

The second is, in bringing the Lips of the Wound even together, which were separated.

The third is, in retaining the Lips so brought together, that they may by Consolidation be restored to their former Figure.

The fourth is, in conserving the Temperament and natural Heat of the Part, in order to Union.

The fifth is, in preventing ill Accidents, and correcting such as have already seized on the Part.

What is required in compound and contused Wounds. Thus much is required if the Wound be only Simple; but if it be a Compound Wound, with Loss of Substance, or Contusion; then he hath somewhat more to do. As where there is Loss of Substance, there he must assist Nature with his Sarcoticks, for regaining what is lost; and where there is Contusion, there he must endeavour the turning what is contused into *Pus*, or Matter, which must be perform'd before there can possibly be any Reunion.

The first Intention, in taking out extraneous Bodies. As long as there is any strange Body or different Substance to keep off the Union, you must not hope to make any Cure of a Wound. Therefore if any such be to be drawn forth, before you attempt it, consider seriously, first, whether it can be done or no; secondly, whether safely.

For, first, sometimes the Weapon sticketh so fast, that by no Art it can be extracted. Then it is of Necessity to be left to Nature, who in this case sometimes worketh Miracles. For I have known Pieces of Splinters, &c. sometimes stick so fast in the inward Parts, or to have been so inclosed, that we could by no means get them out; yet at length, upon Apostemation of the Part, they have thrust forth.

Secondly, You are to consider whither you may with Safety pluck out the Weapon or no. Some will live a Day with the Weapon in their Body, who would expire upon the Moment of Extraction. But if your Judgment suggest to you that the Patient is recoverable, make haste, out with it before the Part be inflamed.

Which way the Weapon is to be drawn out. If the Weapon have pierced deep, and thro' great Vessels in nervous Places; or if the Part opposite to it be full of Veins, Arteries and Nerves, or have a Bone lying in the way, or over-against the Wound; if there be no great fear of Laceration, pull it out the same way it went in; for the effecting of which, our Masters have left us Variety of Instruments, the Figure and Use whereof you may see in *Sculptetus*. But if the Point of the Weapon have pierced above half way through the Member, and there be no Bones nor notable Vessels to hinder you, (here is use of your Anatomy and exact Knowledge of the Parts) either thrust the Weapon through,

through, or make way for it by Incision on the contrary Side; but beware the Weapon be not too big, lest you do make two large Wounds for one.

If the Weapon stick in the Bone, move it up and down to loosen its Point, and then pluck it out; but in *stuck in a case* it will not move, cut away the Bone before you extract it.

If a Weapon be fastened betwixt two Joints, make an Extension of the Parts both ways, as it is the manner in Fractures and Dislocations, that so the Tendons and Ligaments being stretched, the Weapon may with more Ease come out. But do this with Moderation, lest you break some notable Vessels, and a Flux of Blood or some ill Accident befall you in your extracting it. It will be necessary in this Work, that you consider the Position the Part was in when the Wound was inflicted. *Gesner* hath a Story in his *Observat. de Chirurgiæ dignitate & præstantia*, of a Chirurgeon, who, when he could by no means get forth an Arrow, asked the wounded Patient in what Posture of his Body he received the Wound. Understanding it was done on Horseback, he placed him in a riding Posture, and immediately drew out the Weapon.

The Weapon thus drawn out, cleanse it from Rags or ought else, and permit the Wound to bleed, accordingly as you in your Judgment shall think fit, still having respect to the Constitution and Habit of Body, that what is in the small Veins cut asunder may flow out, as well to hinder Inflammation, as the Generation of much Matter. The Bleeding staid, if there be Hair growing about the Wound, shave it off; then wipe away the clotted Blood with a Sponge dipt in Red Wine, Oxycrate, or Water: But if it stick deep in the Wound, be not too busy with your armed Probe, for thereby you may stir up a new Bleeding; whereas this concreted Blood keeps the Wound warm, and defends it from the outward Air; and by Digestion, Nature will thrust it forth.

The second Intention is performed by bringing the Lips of the Wound exactly together.

This Intention is deliver'd in a few Words, but they are to be observ'd as a Law; for without that Reduction of the Lips, a slow and deform'd Healing follows.

Intention,

Unitien.

Nature

Nature hath nothing to do here in bringing the Lips together; that is the sole Work of the Chirurgeon; who must not lay a Pledgit, or crowd a Dossil of Lint or Tent into a little Wound; no, that is the way to keep the Wound open, and make it painful, whereby De-fluxions are stirred up, the Temperament of the Part weakened, and the Cure prolonged; contrary to the Intention of all who have writ of Wounds, and to the Practice of our knowing Chirurgeons here. Yet among the Pretenders to that Art, we often meet with such Work. As for Instance:

Observation concerning Dossils in simple Wounds.

A young Man was wounded near *Highgate* in the Back, slanting under the Right *Scapula*; he had another Wound also on the Back, and another thro' the upper Part of the Left Shoulder, with a long Gash over the Forehead, and others besides, some whereof were not considerable. The next Day being carried thither to dress these Wounds, I found them all distended with Tents and Dossils of Lint, disposed to inflame and swell, and the Patient exceeding full of Pain. After I had taken out these extraneous Bodies, my Endeavour was to dress them so as I might incline their upheaved Lips to return to their natural Site. To which Purpose I fomented them with Milk, and applied Pledgits spread with a Digestive *ex terebinth. cum vitell. ovi*, embrocating them with *ol. ros.* then by *empl. è bolo*, and Bandage with gentle Compression, I dress'd him up; and afterwards here in Town cured him by Sarcoticks and Epuloticks, as in Compound Wounds; a longer Work, which at first ought to have been done by Agglutination. Parts separated and disjoined, are to be brought together gently and equally, that they may touch one another, and so be prepar'd for Unition.

Unition to be effected first, gently. This must be done (I say) first gently; *sen-sim & sen-sim*, as *Fallopinus* hath it, by little and little; not hastily at one pluck. If the Parts be equally soft, bring them equally together; if the one soft, the other hard, and not to be moved but with Difficulty, bring the soft Part to the stubborn. If the Parts be grown stiff with Cold, as when the Party hath been left in the Field all Night, which after a Bittel hath often happen'd, (and particularly to a merry Fellow, a common Soldier, that used to wear an Iron Scull under a Cap, and from thence

was

was called by a Nick-name ; his Wounds were large, and the Lips harden'd with the Cold, and it was well for him, his Bleeding being thereby stay'd;) in this Case you are to supple them, by fomenting them with Milk or warm Water, or else embrocate them with Oil, till you perceive the Lips made soft enough for your Purpose, before you endeavour Re-union.

Secondly, *equally*, that the Parts cut asunder may answer one another, as well in the Top as the Bottom, *Secondly, equally.* Brim to Brim; and, if possible, underneath Vessel to Vessel; that Nature may be in a Capacity of doing its own Work, and by virtue of its Balsam, re-unite, agglutinate, consolidate, and heal the Wounds; in all which Intentions she is the Agent, and the Chirurgeon only the Assistant. Which Assistance, that it may be the more effectually given, we must go on to the Third.

The third Intention is, Deligation, or retaining the *Parts so joined together.* *The third Intention,*

For the effecting of this, our famous Masters have left us two principal Means, *Fasciæ* and *Suturæ*, Row-
ling and Stitching; to which some, nay, most of them, added *Fibulas*, or Clasps: But I will not put you up-
on that. If the Wound be small, and in a fleshy Part,
and according to the Length of the Fibres or Mem-
ber, you may perform the Cure by *Bandaage*; for here *Bandage.*
Nature will truly act her Part, by Application of Blood
and Nourishment to both Sides indifferently, and finish
the *Coalitus* without your farther Assistance. And this
is that which gives such Credit to the Sympathetick
Powder. In the Application of this, it becomes every
Chirurgeon to be much experienc'd, in respect of the
unspeakable Commodities which the whole Art receiveth
thereby.

By *Bandage*, not only are Parts dextrously accom-
modated for Union; but such also as would unnatu-
rally grow together are kept asunder. In Burnings,
Scaldings, &c. the Fingers would many times grow to-
gether, the Chin wou'd grow to the Breast, the Arms
to the Sides, were they not this way hindered. By
them are Fluxes averted, and the Delapse of Humours
into the inferior Parts forbidden; and, being already
lodged, they are press'd out. By these are good Juices
advan-

advantageously forced into Parts emaciated; as, if the Right Arm pine away, rowl up the Left from the Hand to the Arm-pit, that the Blood being press'd out into the *Vena cava*, or rather hindered to flow in so fast by the Artery, may with more Eagerness flow into the other Side where it was wanting. By these we see great Fluxes of Blood, large *Hæmorrhagiæ* every Day stayed; by them are ill-shap'd Wounds brought into better Figures, and made more apt to be cured; by them is the Force of your Applications help'd and further'd, they keeping them close to their proper Places where your Care hath bestowed them; by them is the true natural Form and Beauty of the Part commonly preserv'd.

*Three Sorts
of especial
use.*

Three especial Sorts of Fasciation or Rowling, pertaining to our present Work, have the Worthies of our Profession commended to Posterity. The first they term *Incarnatrix*, or *Agglutinatrix*, the Incarnative or Agglutinative; the second *Retentrix*, or Retentive; the third *Expultrix*, or Expulsive.

*1. Incar-
natiue.*

The *Incarnative* is that which brings the Lips of the Wound together, and conserveth them in their right Figure. It must be more strict than the Retentive, and more loose than the Expulsive; and is the most useful in simple, fresh, and yet bleeding Wounds. The manner of performing it is thus.

Having in Readiness a Rowler of such Matter, Length and Breadth, as I shall anon shew you; rowl it up at both Ends firmly to the Middle; then lay the middle Part of the Rowler on that Part which is opposite to the Wound, to prevent Pain and Inflammation. You are then, after you have made a Turn upon the Wound with both Ends of the Rowler, to go up with the one, and down with the other, and take so many Turns about the Part as may be requisite for the restraining the Flux of Blood, or, according to the Season of the Year, to defend it from Cold, and yet not keep the Wound too hot, for that may weaken the Part. You must also be careful that your Bandage be not too hard, so as to intercept the Spirits. Your Rowler running downwards, will press out the Matter from the affected Part, and by passing upward, hinder the Influx of Humours.

The *Fascia Retentrix* is used to keep your Dressings 2. Reten-
on close about the Wound: They, for the most part, tire.
are only of use in Wounds of the Head. There must
be a Moderation in binding with this Bandage.

Fascia Expulsiva is perform'd by a Rowler of one 3. *Expul-*
Hand: The special Use of it is, to expel Matter out of *five*.
Fistula's or Sinuous Ulcers; as also to prevent the De-
scents of Humours, and to expel such as have already
seated themselves upon the Part wounded, or otherwise.
Do it in the manner following.

Begin in the sound Part, beneath the Seat of the Hu- *How hard*
mours, and rowl upward pretty strait at first; and by *to bind*
degrees, as you come nearer the Mouth of the Wound,
gentlier and gentlier. If you will press out the Mat-
ter contain'd in the Cavity of the Wound, you must
rowl loosely there a Turn or Two; then harder, and
yet a little straiter, the higher you go, to hinder the
Descent of Humours; but not too hard, for fear of
harm. *Terminus sit bona laborantis tolerantia*; *Celsus*:
Let it be made with such Moderation, as the Patient
may well endure it. *Hippocrates de Offic. Medic. Vincu-*
lorum aliud per se (saith he) *remedio est, aliud iis quæ re-*
medio sunt subservit: Amongst Ligatures, some of
themselves are Remedies, others are Servants to Reme-
dies. And true it is in these; for the Incarnative and
Expulsive are in themselves, as you may perceive, Re-
medies, and the Retentive the common Servant to
them all.

To these *Fallopian*, in *Tract. de Vulneribus in genere*, Four other
adds four more, viz. 1. *Fasciam disjunctionis*. 2. *Fas-* *Bandages*
ciam directionis. 3. *Fasciam facientem Apostema*. 4. *added by*
Fasciam prohibentem Apostema.

1. *Fascia disjunctionis*. By this Rowling, Parts are
kept from joining together, as the Fingers when they
are bared of the *Cutis*.

2. *Fascia directionis*, is that which assisteth in making
a crooked Part strait, or bendeth a Part unnaturally
strait to his proper Figure.

3. *Fascia faciens Apostema*, is that which will procure
an *Apostein*, by summoning the Matter up into one
Part, which might perhaps dangerously flow into others,
and those more principal

4. *Fascia prohibens Apostema*, is that which forbiddeth the Collection of Matter, and consequently hindereth the Generation of an Aposteme.

Of what Rowlers are to be made. Their Length.

Their Breadth.

For the Matter of your Rowlers, they must be made of good strong even Cloth, white, clean and gentle, without Hem, Seam, or Thread hanging by.

Let the Length be such as the Member affected, and the Multitude of Circumvolutions require; longer in Winter than in Summer. *Hyeme (saith Celsus) sapientia circumire debet: Æstate, quoties necesse est.* Rowl on, on and again, in the Winter; in the Summer no oftner than needs must. His Ground, I suppose, he had from our great Master, Sect. 5. Aphor. 20. *Frigidum ulceribus mordax, cutem obdurat, dolorem insuppurabilem facit:* Cold nippeth a Wound, makes the Skin hard, and causeth Pain which cannot be digested. For the Breadth of the Rowler, Petr. *Pigraeus, Lib. de Vulneribus*, is most punctual. Let them be for the Shoulders, saith he, of six Inches broad; for the Thighs, of five Inches; for the Legs, of four Inches; for the Arms, of three Inches; for the Fingers and Toes, of one Inch broad. But this your Judgment will teach you to alter, according to the Conformation, Shape and Positure of Parts.

Fasten not your Rowler by tying a Knot; nor yet sow it upon the Wound, or where you cannot easily come at it again, lest you hurt your Patient. Quickness and Neatness distinguisheth the Workman from the Ignorant and Unskilful. As the Subject is more noble you work on, so strive to perform your Office more excellently; intending not only your Profit, but Decency in the Dispatch, that you may please the Eye both in the Time of, and when you have done your Work: Thus shall you gain Credit to yourself, and endear your Patient to submit the more readily to your Rules, which is not the least Part of the Cure.

Sutures, three sorts.

The next thing that offers itself for keeping the Lips of the Wound together are *Sutures*; and they are of three Sorts: First, the Incarnative; Secondly, the Re-stringent; and Thirdly, the Conserver.

1. Incarnative.

The first is that which is in most Use amongst us, and is by making so many Stitches at a Distance.

The second is the Glover's Stitch, and much in use 2. *Refirin-*
amongst the *Spaniards*, who stitch almost all Wounds *gent*, or
tly it. In the Forehead and Face I have seen them *Glover's*
bring the Wounds very close: The third Day they *Stitch*.
commonly cut the Knots off, and draw the Thread
out; then with dry Stitches keep them so brought
together; and in two or three Days more they cure
them.

The third Stitch is of use in great Wounds, and *Conserver*.
those of the *Oesophagus*, &c. to hold them forcibly to-
gether. It is perform'd with Pins or Needles, as in
Hare-lips.

There are four sorts of Stitches, mention'd by the
Ancients, for the Wounds of the Belly, whereof I shall
take Notice only of one, which I have made use of
myself in the stitching of those Wounds, the Manner
whereof is thus: You are to take up the *Peritonæum*
on one Side, and leave it on the other; and then take
it up on the other Side, and leave it on this. It is so
made, that the *Peritonæum*, which is a dry Body, may
be united with the Musculous Flesh; otherwise only
the fleshy Parts would unite, and the *Peritonæum* lie
open; upon which a *Hernia* would certainly succeed,
and the Patient be put to the Trouble of wearing a
Truss the rest of his Life. The Thread you are to use
for this Purpose, ought to be a strong round white
Thread, proportionable to the Needle, and both ac-
cordingly as the Wound requireth. You must remem-
ber to cleanse the Wound of its clotted Blood, if you
can; but however, go on with your Work, that Blood
will find its Passage out.

In great Fluxes of Blood, the Glover's Stitch is best.
Endeavour in your stitching to bring the Artery and
Vein to its wounded Fellow; so shall you the likelier
secure yourself, and make the Work more seemly.

In the Incarnative, you are to consider the Wound.
If you find it but the Length of a Finger's breadth, or
a little more, 'tis not worth the stitching; your Medi-
caments and Bandage will keep the Lips together, and
quickly heal it.

If the Wound be of two Fingers breadth, make one *The Dis-*
Stitch in the Middle; if three Fingers breadth, make *tances of*
two Stitches; if four Fingers breadth, three Stitches; *Stitches.*

FOUND

and so go on, making a Stitch less than the Wound is in Number of Fingers. Sometimes in declining Parts we make our Stitches at a little more Distance.

Time of taking out the Stitches. The Time of taking out the Stitches is, when the Parts are agglutinated; which is sooner or later, according to the Habit of Body, or Season of the Year. Commonly in great transverse Wounds, eight Days are requir'd; in less Wounds not so deep, three or four Days:

Caution.

In the Face, do it the next Dressing, lest the Stitches make so many Scars. But in this Work you must use your Judgment; for sometimes the Wound may seem to be agglutinated, while the Lips are held together by Suture; which, after the Stitches are cut out, is not so exactly cicatrized, but that you might have done better to have left the Stitches a Day longer. But in this Case the dry Stitch may help you; and that is another Way of keeping these Wounds together.

Dry Stitches.

They are made with little bits of strong Linen Cloth, triangular, or quadrangular, or of such Figure as may serve your Purpose. These are most proper in the Face, to avoid the other way of Stitching; yet they are of use in other Parts, to preserve the Lips close. They are commonly spread with a Mixture of *sang. dracon. thuris, aloes, farin. tritic. gumm. tragacanth. an. part. æqual. cum albumin. ovi.* They ought to be of such a Consistence, that they may adhere firmly to the Skin. They must be applied at such Distance as they may best perform their Work. After they are dried on, you must bring the Lips of the Wound close together, and retain them so, taking care they be not wet by the Matter.

The Fourth Intention, in preserving the natural Temperament.

The fourth Intention is, the preserving the natural Temperament of the Part, that thereby Agglutination may be obtain'd. Which Agglutination, indeed, as I have already hinted, is the Work of Nature alone, by whose only Power all Parts wounded, disjoined and broken, are knit and made one again. But in regard there is a certain *Méáium* which answers in Proportion

Nature agglutinative of Wounds, healing.

to a Glew, requir'd in this Work, Nature taketh what is next at hand, even the Nourishment of the Part which is hurt, to make it of. *Ubi morbus, ibi remedium,* is here as an Oracle; Where the Disease is, there is the Remedy. No sooner is the Wound made, but the Balsam is discover'd. Blood (at least the serous Part of it) is the Glew

Glew which she useth, both in curing by the first and second Intention. The first being perform'd *per Sym-* 1. *per physin*, i. e. a Re-union of the Parts without any *Me-* Sympy-*dium*; by which Word I here mean any *Callus* or Flesh, sin. or other Body interposed; for in another Sense the Balsam of Nature is the *Medium*, the Instrument of Unity, and knits the Parts together: The second *per 2. per Syssarcosin*, i. e. with a *Medium*, or Interpolation of Syssarcosin some Flesh or Callous Substance, that fills up the Space sin. between the Lips of the Wound. Great Care must therefore be taken, that the Blood offend neither in Quantity nor Quality. Too much bringeth on proud and loose Flesh, as too little doth defraud the Part, and affordeth not a Competency of Matter for the Work. If the Quality of the Blood be ill, it cannot produce good Flesh; as the Blood is, such is the Flesh.

The Means whereby this Intention is perform'd, is a *Regimen*. Regimen of the Patient; and that is either Universal, 1. *Universal* as to his Diet; or Particular, as to the peculiar Management of the Part itself. As to the Universal, we are to consider, first, whether a full or slender Diet be to be used. This hath been a Dispute in former Ages; but, I think, no Man of common Sense but knows, that as a full Diet is hurtful for those of a Plethorick Body, in Wounds where there is great Inflammation and like Symptoms; so when a Body hath been exhausted thro' Loss of Blood, or the like, it's Reason that a greater Liberty should be allowed, as to take Broths, Jellies, new-laid Eggs, &c. Withal, I conceive, there should be Consideration had of the Patient's manner of *considering* living. Some People have so accustom'd themselves to *tion from* drinking of Strong Drinks, that without such a Proportion they cannot live. I could instance it by many *ent's man-* Stories, if it were necessary; but I shall give you one *ner of li-* for all, and that from Abroad.

Ed. Br. an old Servant to a Person of Honour, was *Ed. Br. cu-* bit by a Monkey in the Back of his Hand. To prevent *by al-* vent Inflammation, I forbid him Wine. The next *lowing him* Morning he complain'd he had not slept that Night; *Wine*. that he was faint and sick; and that his Wound was the least of his Ailment. That Day he continued faint and ill, and the next Morning complain'd again of his want of Rest; and that Afternoon he swooned, and com-

plain'd he could not live without Wine. He had good Broths, Caudles, and such-like; and I believe he did drink some Wine. (But he was allow'd by his Master a Bottle of a Quart every Morning for his Draught, and was seldom sober.) His Wound was indigested and inflamed. I complied with his Desire; he drank again as he pleased; his Sickness went off, his Wound digested, and he was soon after cured.

This I have seen often in some of the *Dunkirkers* at Sea, who drank extraordinarily, and were full of Drink at the Time of their Sea-fights. I could scarce ever cure any of them without allowing them Wine; and thereby their Spirits were kept up, and I had the Liberty to bleed them as I thought fit. When these kind of People eat as plentifully as they drink, they then upon a sudden Change of Diet labour under a *Crapula*, and are subject to Fainting, or have Cholick, *Dysuria*, &c. and if the Wound happen in the *Abdomen*, it gives a Suspicion (to those that are not well skilled in the Symptoms of Wounds) to think that it ariseth from the Penetration of the Wound, when there is no such Thing; and so by the Perseverance in those Rules the Patient suffers.

It has been a common Saying, *A Hair of the same Dog*, and thought that Brandy-wine is a common Relief to such. What then must become of such a one, after hard drinking for many Months together, if he chance in heat of Drink to be wounded, and from that Time his Chirurgeon condemn him to Ptisan for a Week together, nay two Days? Will he not faint and languish, and his Wounds become indigested and inflamed? You may laugh at my pleading for them; but I hope you will consider I am a Water-drinker the while.

As for other Things, such Diet is to be observ'd as their Strength will permit. We do not use to purge with Catharticks in Wounds, lest by stirring Matter, it flow to the weak Part: But we allow Lenitives, as *Cassia*, Tamarinds, *Manna*, *Senna*, Rhubarb, with *Sal prunellæ*; also Electuaries, as *elect. lenitiv. diaprun. syr. ros. solut. de cichor. cum rhabarb.* also Broths, wherein have been boiled Lettice, Succory, Endive, Sorrel, Purslane, Burrage, Bugloss, &c. And we let them Blood according

according to the Strength of their Body, and as Symptoms indicate.

Another Part of the Regimen of wounded Persons *Vulnerary* will consist in giving of Vulnerary Drinks ; of which Drinks, we find many mention'd by Authors, and the *materia Powders, medica* very large ; witness that great Tribe of Vulneraries and Electuaries in Parkinson's Herbal.

The most common Simples with us in *England*, are Comfry, Bugle, Ladies-mantle, Agrimony, Sanicle, Pauls-beony, Fluellen, Perwinkle, Mugwort, Plantain, Horse-tail, Adders-tongue, Avens, Cinquefoil, Wild Tansie, Vervein, Ground-ivy, Golden-rod, Herb-trinity, Centory, St. John's-wort, Snake-weed, Knot-grafs, Mouse-ear, Yarrow, Scordium, Strawberry Leaves and Roots, Tormentil, Bistort, Valerian, Red Roses, &c. Some of these are made choice of to be boiled in Water or White Wine, with an Addition of Honey ; of which sort you have sufficient Examples in the *Decoctum traumaticum* of the *Pharmacop. Lond.* Their principal Use is in Wounds of the *Thorax* and *Abdomen* ; yet they are frequently prescribed in all great Wounds. Sometimes also, if the Disease run out to a Length, we add *Guaiacum, Sarsa, and Scorbutical Medicines*. There are likewise Powders made of Crabs-eyes, Coral, Nutmeg, &c. and Electuaries of some of the aforesaid Roots and Herbs beaten up with these Powders.

The particular Regimen is, in preserving the natural Heat and Tone of the Parts, without which we can hope for no Union. For the better understanding hereof, I must put you in Mind, that there is not any Part of our Body admits of a Solution of Continuity without Pain. Every Scratch in the Skin, and little Cut in the Finger, is painful ; much more are the deeper Wounds in the Flesh. This Pain stirs up a Heat fermenting in the serous Part of the Blood, which readily makes way to the Wound ; and, if not timely prevented, distendeth and raiseth the Part into a Tumour with Inflammation. If this happens in a full Body, or one of an ill Habit, where the Blood is serous, and more apt to ferment, the Mischief is the greater. And if the Wound be in a declining Part, as the Legs, the Influx of Humours is more abundant ; and the Member through its Weakness not being able to assimilate, nor

yet expel them, is the Causē that Crudities do heap upon the lower Parts, and make an Oedematous Tumour.

A Person prick'd with a Thorn in his Leg.

To make this more plain, I shall give you one Instance of the many that happen daily. A young Gentleman about 18 Years of Age, of a good Habit of Body, one Day sporting in the Country with his Gun and Dogs, was prick'd with a Thorn on the outside of the Calf of his Leg. He took little Notice of it till the Evening, and then dress'd it with a little Balsam. The next Morning it was more painful and inflamed, and at length terminated in a Phlegmon. I was then sent for, and found the Tumour large and full of Matter, and in the lower Part, about the Foot, an oedematous Tumour. I open'd the Swelling above, and discharging a Quantity of Matter, cured the Patient as is usual in Phlegmons.

If this Person had been treated according to the universal Regimen, by Bleeding and lenient Purgatives, &c. nay, if only after this particular Regimen, in preserving the Temperament of the Part, he had been dress'd, as in this Case he ought to have been, by Refrigerants and Astringents, to have prevented the Influx of Humours, and with a Pledgit of *Basilicon*, to cause Maturation in the festred Scratch, with convenient Bandage over all; it had preserv'd the Tone of the Part, and cured the Sore, without farther Trouble.

To proceed rationally by this Intention in Wounds, your first Application ought to be of such Medicaments as have an agglutinative Faculty, as *bolus Arnen. sang. dracon. thus, aloes, gum. elemi, colophon. terebinth.* and apply over them such as are cooling, and of an astringent Quality, to resist the Influx of Humours, as Cloths dipt in the Juices of the following Plants, *sol. plantag. equiseti, millefol. vincæ pervincæ, ulmi, or Red Wine, or Oxycrate.* To which you may add some of these Powders, *flor. ros rub. balaust. nuc. cupress. gallar. far. bord. & fabar. & oleum olivar. matur.* These simple Medicaments may be proportionably mixt, according to the Habit of Body, and Condition of the Wound. In small and superficial Wounds, Nature of her own accord is wont to effect the Cure; she seldom requiring more from us, than that the Lips of the Wound be

be brought close together, and defended from the Fluxion, &c. as aforesaid, and with Bandage so retained. A Pledgit of *liniment. Arcei* with *empl. diapalmæ* frequently serves the turn. But in greater Wounds that will not be so easily cured, we stitch the Lips together, and sprinkle them with such-like Powder: Rx *bol. armen. thuris, sang. dracon. an. part. æqual.* and apply a Mixture of some of the same Powder with the White of an Egg over them, with a Compress prest out of Oxy-crater, and a suitable Bandage over all. This is generally the Way: But lest by the Adhesion of this emplastick Medicament the Lips of the Wound should be torn or disturbed in taking the Dressing off, I chuse rather to apply over the sprinkled Powders a Pledgit with some of these following Sarcotick Unguents: Rx *terebinth. Venet. ʒij. gum. elemi ʒij. sang. dracon. mastich. an. ʒj. Misc. & fiat Unguent. S. A.* Or this; Rx *terebinth. ʒij. resin. pin. olivan. colophon. an. ʒjls. mastich. ʒj. croci ʒj. ceræ ʒij. olei hyperic. q. s. fiat Unguentum.* Over which may be applied any of these following Emplasters, viz. *empl. diapalmæ, diachalcit. de lithargyr. de bolo, &c.* In all Wounds where I design to cure by Agglutination, and would preserve my Stitches, I forbear the Use of Fomentations and slabby Medicaments: Nor will you have occasion for such Applications, if you proceed rationally, as hath been aforesaid; for Nature will do her Part towards the Agglutination of the Wound, if you defend it from the Influx of Humours. I always accounting these Wounds near cured, when the Lips are retained close together, and dressed as aforesaid.

Thus far I have proceeded in the Agglutination of *Of complexe Wounds: I shall now consider of Wounds with pound Loſs of Substance made by Bill, Pole-axe, Sword, &c. Wounds.* some cutting twice or thrice in one or near one Place, whereby the Wound is large, transverse, yea and oblique, at the same Time, and the Lips contracted various Ways, and so the Cure is rendred much more difficult. These Kind of Wounds are not so often seen in Times of Peace, but in the Wars they are frequent, especially when the Horse-Men fall in amongst the Infantry, and cruelly hack them; the poor Soldiers the while sheltering their Heads with their Arms, sometimes

time with the one, then the other, until they be both most cruelly mangled: And yet the Head fareth little the better the while for their Defence, many of them not escaping with less than two or three Wounds through the Scull to the Membranes, and often into the Brain. And if the Man fly, and the Enemy pursue, his hinder Parts meet with great Wounds, as over the Thighs, Back, Shoulders, and Neck. Mr. Sanderson, now one of the Chirurgeons of St. Bartholomew's Hospital, was once with me, assisting in the dressing such. At Sterling in Scotland, Mr. John Chase, Apothecary to his Majesty, helped me in the like Work. One of the Soldiers had such a Gash thwart the Nape of his Neck, that it was a Wonder to us he lived. His Wound was full of Maggots; and so were those of all the rest that were inflicted on the hinder Parts, they having been some Days undress'd.

In order to the Cure of these Wounds, you are in the first Place to cleanse them, and then to endeavour the bringing of the Lips together by the Incarnative Suture, making so many Stitches as may retain them together. And if you doubt this Way not sufficient, you may then, as in a Hair-Lip, pass Needles or Pins through the Lips of the Wound, with little Plates of Lead to secure them from tearing. But if the Wound be so deep, as you suspect its incarving in the Bottom, you must leave a declining Orifice for the Discharge of Matter. If the Wound hath lain long undressed, or were not stitched at the first Dressing, and be now so contracted and stubborn, that the Lips of it will not be brought near one another; you must then foment them warm with some lenient Decoction, *ex fol. & rad. althæa, malvaæ, viol. sem. lini, &c.* or with new Milk; then join them together, as hath been said, and dress them as Wounds so stitch'd. But if you left a declining Orifice, keep it open by a small Tent, dipt in some such Medicament as shall be by and by prescribed, and after Digestion withdraw the Tent, and heal it as such like Wounds. The greater Wounds, which cannot be brought together by Suture, must be digested, and so disposed as that new Flesh may be generated to fill up the Cavity: To which Purpose Rx. *terebinth. ʒij. far. hord. ʒvj. tkuris ʒj. Misc. cum vitell. ovi.* To this after a Day

a Day or two may be added *mel. ros.* During which, the Humours ought to be diverted from the Wound, by the universal Regimen set down of Bleeding, Purg-
ing, &c. and by the external Application of Refrigerants with good Compress and Bandage, to press the Lips of the Wound together, that it may be the sooner cured. After the Wound is digested, you may deterge with *mundif. Paracelsi*, or with this of *Quercetan's*, which is also a good Sarcotick: Rx fol. *plantag. apii*, an. Mj. *ros. rub.* Pij. *wini rub.* 3vij. coq. ad medietat. in colat. dis-
solve *sacchar. rub.* 3ij. *terebinth.* 3j. *far juniper.* & *orobi.* an. 3vj. **aloes, myrrhæ.* an. 3j. decoq. rursus, & addendo
cæræ q. s. reduc. ad formam Unguent. or with this Bal-
sam of the Spanish Priest, commonly called *ol. Aparici;* Rx *ol. olivar.* 3ij. *terebinth.* *Venct.* 3vij. *frument. integr.*
3j. *sem. hyperici* 3ij. *rad. card. benedict.* *rad. valerian.*
an. 3j. pul. thuris, vernicis, *an. 3ij.* The Seeds and Roots are to be cut and beaten, and infus'd two Days in White-Wine: Then the Oil and bruised Wheat must be put to it, and so boiled together to the Consumpti-
on of the Wine; then strain the Liquor hard out, and add the *terebinth.* thus, &c. giving it two or three Warms more, and reserve it for your Use. In these larger Wounds, it will be necessary to apply warm Stupes wrung out of Red Wine, wherein have been infus'd *flor. ros. rubr. balaust. ruc. cypress.* &c. But those Wounds that are full of Maggots or Worms, ought to be wash'd with a Decoction *absinth. card. be-*
nedict. rad. gentian. myrrh. aloes, &c. and deterged as above-said with Mundificatives; after which, you may proceed in the same Method of Cure, as is before-
mention'd. As to the Time of dressing Wounds, the second Dressing ought not to be till the Third Day, by which Time we suppose them somewhat digested: From that Time every other Day may be sufficient. *Galen*, speaking of the dressing Ulcers, saith, he dressed them but every third Day, though the Matter flow'd very much; and but every fourth Day in Winter. Indeed the too frequent Dressing is hurtful: Yet there may be Occasion of opening them sooner than by him pro-
posed, for the strengthening of Bandage, or for the pre-
serving of the Stitches, by putting on dry Stitches. Also the Retention of Matter causeth the Suture to relax,
and

and the Lips of the Wound to open again : Therefore that ought to be left to the Discretion of the Chirurgeon.

After the Cavity in the Wound is incarned, you may cicatrize with *unguent. desiccat. rubr. aq. calcis, &c.* or with the Vitriol or Allum Stone, and dry Lint.

Of contused Wounds. If the Wound be made by a Fall or Blow with great Contusion, you must endeavour that the bruised Flesh be digested and turn'd into Matter ; to which Purpose *unguent. basilic.* is proper, applied warm upon Lint, or dissolv'd in *ol. lumbric. lini,* or such-like, anointing the Parts about with *ol. ros. & myrtill. cum album. ovo.* with which you may also make up a Restrictive, with an Addition of *bol. Armen. sang. dracon. balaust. flor. ros. rub.* and apply it over all. But if the Wound were of some Days Continuance before you were consulted, you must then foment it with Discutients, and embrocate the contused Parts with *ol. cham. sambuc. rutac. &c.* and continue the Application of Maturatives, proceeding as is set down in the Chapter of *Ecchymosis.* After Separation of the contused Flesh, the Loss of Substance must be restor'd by Sarcoticks, and the Wound cured as abovesaid ; remembering that in these Contusions Venæsection is most necessary. If the Wound be deep, and the Orifice narrow, yet capable of enlarging ; it must be laid open proportionably, that the Matter may not be retain'd, and render the Wound more hollow. But if the *Sinus* be of any great Length, and so depending, that the Matter cannot discharge by the Wound, you may then make a Perforation in the lower Part for the Discharge of it, by Knife or Caustick, or both ; first Caustick, then Knife : or by a Seton-Needle with a twisted Silk or Thread, as hath been shewed in *Sinuous Ulcers* ; and proceed accordingly.

What I have said of Wounds cut and hack'd in Heat of Fight by a broad Sword, happeneth sometimes in fighting or foining with a Rapier. For if the Thrust be redoubled, an Attrition may be made in the lower Part of the Wound : and if there be such an Attrition there, or if some tendonous Body be there wounded, it will be too painful to heal by the first Intention ; and if it run far, and deep among the Muscles, it may be a maiming of the Person, or an endangering of his Life,

to cut such a Wound open from Top to Bottom. Wherefore you ought to consider well the Manner of the Wound; and if it penetrate so deep, and be not capable of being laid open by reason of the Thicknes of it, make a Search with a Probe to the Bottom, and feel how far Distance it is there from the Skin: And if it do not lie far off, nor under any considerable Vessel, the speediest way of curing the Wound, will be by passing in a Director, and cutting it open; which done, keep it open, and permit the upper Part to agglutinate. But if you think it not fit to open, yet mark the Place, that in case there be a Necessity of doing it afterwards, you may make the Apertio more certainly. That done, dress the Wound with a proportionable short Tent, arm'd with a Digestive *ex terebinth. cum vitell. ovi*; and embrocate the Parts about with *ol. ros. myrtill. & aceto*; over which apply *empl. è bolo*, or such like; and afterwards proceed as aforesaid. For your farther Information and more Caution, I shall give you one Instance of the ill Effects, of cutting open such Wounds the whole Length.

Some Years since a young Gentleman was wounded in a Duel, the Rapier entred into his Right Side, slanting by his short Ribs under the Muscles, reaching within a Finger's Breadth of the Spine, with a redoubled Thrust. He was carried to a French Chirurgeon's House and dressed by him. The third Day after, I was fetch'd, and saw the Wound inflamed and undigested, likewise the Orifice over-stretch'd by the extraordinary Bulk of the Tent. I advised the Dressing it with one lesser, and arm'd with a Digestive, also Embrocations, &c. as aforesaid. But it was in vain. This Pretender dressed the Wound with a Tent proportionable to the former, anointed with some Unguent wherein was *sang dracon.* binding a Stupe over it. By this Way of Dressing the Pain and Inflammation increasing, I was fetch'd again two Days after, and then made a Search; and feeling my Probe penetrating obliquely down deep among the Muscles, within a Finger's Breadth of the Spine, (as aforesaid,) I concluded it best to make an Opening there. Accordingly I used a mild Caustick, then dressed up the Wound with a less Tent, spreading it with a Digestive *ex terebinth. &c.* embrocati

ng *of a double Wound by Puncture.*

cum ol. ros. &c. and soon after applied an anodyne Cataplasm, and so left the Patient to rest. But in the Night, he turning in his Bed, the Cataplasm slid off, and our Monsieur discover'd a discolouring in the Part, and supposing it an Approach of a Gangrene, I was fetch'd out of my Bed. Upon Sight of it, I found it only stain'd with the Saffron and Lupins, which were in the Cataplasm, and applied it again, leaving the Patient better satisfied. But the next Morning I met another Chirurgeon of the foremention'd Monsieur's Acquaintance. We took off the Dressings, and saw the Wound digesting. I proposed the dividing the Escar below, to give vent that way to the Matter; but they were positive for the cutting open the Wound thwart all the Muscles, the Length of between five or six Inches. To which Purpose Sponges were press'd out of Melilot Emplaster, and the Wound fill'd with them. The next Day this latter Operator laid the Wound open, with a Pair of Scissars, so far as his Sponges had dilated it, and dressed it up his Way. The Morning following, the Wound appear'd dry, and the Parts about inflam'd and swell'd very much, and continu'd exceeding painful to the third Day. Then they, being at a Loss, were contented to divide the Escar; upon which, there discharg'd a Quantity of Matter made by Apostemation in that Part: Yet notwithstanding they would not enlarge that Opening, but began where they ended, and cut open the Wound to the Aperture made by the Caustick, and dressed it up as formerly. Thus they having increased the Pain, the Fluxion also increased, and a great Quantity of Matter discharg'd from the lower Part, also a large *Sinus* discover'd itself, stretching over the Spine to the other Side. In order to the curing of this, they design'd Injections; which I endeavour'd to dissuade them from: But they persisting in the Use of them, I protested against their Proceeding, and left them. They laugh'd at me: But about the ninth Day after, the Patient died, and made good my Prediction. For, alas! what else could be expected from such a Division of Parts, and casting in Injections, but to render it more sinuous from Side to Side? Whereas possibly by Digestion and good Compression it might happily have healed.

The fifth Intention is, in preventing of evil Accidents, and correcting such as are already fallen upon the Part. And theie are *Hæmorrhagia*, Pain, Fever, *Intemperies*, Convulsions, *Syncope*, *Delirium*, and *Palsie*.

We shall begin with *Hæmorrhagia*, as being incident to all Wounds; more or les, and sometimes the Cause of all other Accidents; wherefore I have treated purposely of the Wounds of *Veins and Arteries* in a Chapter by itself; so I intend here only to speak of it as it is made by some Authors the second Intention. The way to stop the Bleeding, as it is common in all Wounds, is, by bringing the Lips of the Wound close together by Suture, and by applying such Medicaments to them, as have a drying and agglutinative Faculty; as Galen's Powder of Aloes *Pj. thuris Pij.* and Hares-fur, mixt with the White of an Egg, applied upon a Pledgit; also a Plaster of the same Restrictives, with Compress and Bandage. But if the Wound be such, that you cannot bring the Lips of it together, apply the aforesaid Powder upon Doilis, on the bleeding Vessels, and your Astringents next, with Compress and Bandage over all: Then place the Member in such a Position, as may be for the Ease of the Patient.

You ought to be speedy in the mitigating Pain, for *of Pain.* that nothing dispiriteth your Patient more, nor maketh more Disturbance in Wounds, the Humours flowing abundantly to the pained Part, whence ensueth great Inflammation and Tumour. Wherefore you must hasten to succour it by Anodynes; amongst which Phlebotomy is proposed by Authors in the first Place, for that it maketh Evacuation and Derivation of the serous Humour, which causeth the Grievance. The external Applications proper to ease Pain are, *fol. & rad. althææ, malvæ, viol. hyoscyami, thaps. barbat. flor. ros. cham. melilot. sem. lini, fœnugræc. cydonior, psyllii, papaver. alb. &c.* which may serve for Fomentations and Cataplasms, being boiled in the Broth of a Sheep's Head and Feet, or new Milk. In the beginning of the Pain, a Cataplasm may be applied of *far. hord. fabar. flor. ros. rubr. sambuci*, decocted in Red Wine or Oxycrate, with an Addition of *ol. ros. &c.* If the Parts be already inflam'd, take *fol. kyoscyami* boiled in Milk, with White-Bread Crums, a new-laid Egg, a little Saffron and *ol. ros.*

ros. and make them into a Cataplasm. For more Variety, I refer you to the Chapter of a *Phlegmon* in *Tumours*. If after this it tend to Suppuration, you may proceed as in a *Phlegmon*. If it yield to none of these, you may truly conjecture some Nerve is offended: Then proceed as is said in the *Wounds of the Nerves*. But if Pain be caused by Matter that wants a Passage out, give it one by Knife or Caustick.

Of Distemper by Choler.

If some hot Distemper from Choler offends the Part, which may be perceiv'd by what hath been said of an *Erysipelas*, then these Unguent, *nutritum*, *alb. camph. refrigerans Galeni*, *populeon*, are proper; or this following: Rx *succi plantag. solani, semperviv. an. ʒj. bol. Armen. ʒſſ. lithargyr. loti, aq. plantag. & tutiae præparatae, an. ʒj. ol. ros. omphac. & nymph. an. ʒij. aceti rosacei & ceræ tantillum*; fiat *Unguentum*. If the Distemper be œdematos, then Fomentations, wherein *flor. cham. aneth. meliloti, sem. fœnug.* and such like, have been boiled, may, with good Bandage, serve your Purpose.

Of Fever.

Fever accompanies great Wounds; especially where there is Inflammation, it is almost inseparable; therefore you are the leſs to trouble yourself thereat. But if it continues after the Pain and Inflammation is removed, and hath *Delirium* or *Syncope* with it, there is great Cause to doubt the Welfare of your Patient: Therefore hasten Revulsion by Venæsection of Vesicatores, also use Clysters and lenient Purgatives, to loosen the Body; and prescribe Juleps, Emulsions, Epithems, which, by refrigerating and contemperating the Heat, may relieve the Patient. The other Symptoms of Gangrene, Convulsions and Palsies, are translated to the Discourse of *Gun-Shot Wounds*.

C H A P. II.

Of Wounds of the Veins and Arteries.

THE next Thing that offers itself to our Consideration, is, the Wounds of particular Parts: And first of the Veins and Arteries, which are subject to great Effusion of Blood, therefore require your speedy Help. You may distinguish whether the Blood be from an Artery or a Vein, by the Flowing of it, and by its Colour.

From the Artery the Blood rushes impetuously and *Signs of per saltum*, by reason of the Dilatation and Constriction of the Heart, and is of a florid Colour. The Venal Blood flows with a more smooth and even Stream; it is of a grosser Consistence, and of a darkish Colour.

Of these latter Wounds there is no great Danger; *Prognostick Galen's Powder* with the White of an Egg, and the formerly proposed Way of Dressing, will stay their Bleeding, and cure the Wound in few Days. But those of the Arteries are most difficultly stopt, for that the Blood is in a most vigorous and strong Motion

If these Wounds be not with Loss of Substance or bruised Lips, you may bring the Lips and Mouths of the Arteries both together, and retain them by Suture, passing your Needle, with a strong waxed Thread, through both of them, making the Gloves Stitch, which Guido calls *Suppressio*. Then apply such like Emplastick as this; Rx bol. Armen. ʒiiij. sang. dracon. thun-
ris, aloes, glutin. sicc. an. ʒj. gypsi, farin. volatilis, an.
ʒls. hypocisted. acatiae, sumach. an. ʒiiij. Misc. cum album.
ov. to the Consistence of Honey, and apply over it a Compress squeezed out of Oxycrate or Red Wine; then rowl up the Member with the agglutinative Rowller, beginning on the opposite Part, bringing both the Heads over the Wound: And having taken a Turn or

**Ordering
the Part
and Diet.**

**Bleeding
where.**

two there, rowl upwards and downwards, so as to press the Blood upward, and restrain the Influx from above. Your Bandage must be so made, that it be to the Ease of the Patient: The Position ought also to be such as may prevent Pain. He must keep cool and quiet, and observe a slender Diet. His Drink ought also to be cooling and astringent: As Fountain-Water with *sal. prunell.* or *acetum*, or with Gads of Steel quench'd in it, and sweetned with Syrup of Coral, Pomegranates, Lemons, &c. or this following Draught of *Quercetan's*: Rx *croci Martis, essentia corallor.* an. 3ij. syr. de ros. sicc. & *myrtill.* an. 3ij. aq. *papaver.* *rhaed.* 3iv. *Misc.* so also a decoct. bord. cum *sem. papav.* *alb.* & *hyoscyam.* with an Addition of Rose-Water, and Sugar of Roses, to sweeten it; also a Grain or two of *Laudanum*, in Case of Extremity, if the Patient bears it well. You may also let the Patient blood, by opening a Vein on the contrary Part, if his Strength will permit it, taking a little at a Time only for Revulsion. You may use also Cupping, Friction, and binding the remote Parts, for Derivation.

In Wounds of the Artery, dress not oftner than you needs must; once in five or six Days may be sufficient, whilst there is Danger of Bleeding. But if you find the Blood hath made its Way through all the Dressings, and the Bleeding continues, take them off: And if you discover the Stitches broken, and the Lips of the Wound incapable of being stitched again; consider whether the bleeding Artery may not be taken up and tied: If it may, do so. The Way of doing it you may see in the Chapter of *Aneurisma*, and in one of the following Observations. Then proceed in the Cure by Sarcoticks, &c. But if the Artery lieth so deep that you cannot possibly come to make Deligation on it, proceed by Application of Escaroticks to the Vessel, or by an actual Cautery.

**Escaro-
ticks.**

If by Escaroticks, then you ought to cleanse the Wound of the clotted Blood, and dip your Dossils in some such like Powder; Rx *thur. pulv.* 3ij. *aloes,* *glutinis sicc.* an. 3ij. *chalcanth.* *ust.* 3ij. *arsenici* 3vj. *gypsi* 3ij. Apply these with Lint on the bleeding Artery, and over it, Dossils of Lint dipt in *album.* *ovi cum pulv.* *Galenii*, and dross up the Wound as aforesaid. At your next dressing,

dressing, leave the Escarotick sticking on the Artery, and incarn as fast as you can. For want of the above-said Powders, take Vitriol powder'd and tied in a fine Rag, and apply it to the Artery with convenient Dressings over it, as before-said.

But if after these your Endeavours the Artery yet continue to bleed, you must use the actual Cautery ; by which the Vessel will shrink up at both Ends. You may convey the Cautery down to the Artery through a *Canula* : And that the Cautery may not burn through it, you may cover the outside with a Plaister or Rag wet with the White of an Egg, &c. That done, dress the cauteriz'd Part with Dossils dipt in Mucilage of Quince-Seeds, or with the White of an Egg, and embrocate the Parts about *cum ol. res.* applying *emplastr. diachalcit. cum succis plantag.* &c. over all. After you have allayed the Heat of the Part, digest, incarn, and cicatrize the Wound as followeth.

A Gentleman of about 35 Years of Age, was wound-
ed with a Rapier on the Right Side of the *Aspera vation of a
Arteria*, into the internal Jugular, through his Neck, *Wound of
it passing out below the last Vertebra.* The Wound
was small, yet bled with a full Stream. A Servant stopt
it with his Fingers, whilst I made Dressings ready of
our common astringent Powders, with the White of
an Egg, and a little *acetum*, spread upon a Pledgit of
Lint, and an Emplaster of the same, with Compress
and such Bandage as it would bear. The Wound be-
hind bled when that before was dress'd. I applied the
said Medicaments to that, and caused them to be held
close till they were dried on. Then we put him to Bed,
and kept him cool and quiet. I used all my Endeavours
for the contemporating his Blood, as is usual in
such Cases, and dress'd him but once in four or five
Days, unless I were necessitated by the bursting forth
of the Blood : Yet he bled at times about 16 or 17
Days. His Wound by the *Vertebra* of the Neck healed
in few Days ; and the other near the *Aspera Arte-
ria* was cured by this Way of Agglutination the 19th or
20th Day.

2. Observation of an Artery wounded.

A Man wounded in the Artery under the Right Eye, was immediately dress'd by Mr. Fawcet, Chirurgeon; but the next Day in the Afternoon the Blood burst out impetuously. The Wound had been made by the Corner of a Trencher, and was not so big as a Silver Penny. I dress'd it with *pulv. Galeni*, and applied a Plaister over it, made up with my common Restrictive Powders *cum. album. ovi*, with good Compress and Bandage. The next Day his Wound bled again, and upon stopping thereof with my Finger, the Blood was observ'd to beat all along the Artery, from the Aperature to the Temporal Muscle, with a greater Force than is commonly seen in an *Aneurisma*. I pierc'd through both the Lips and Artery with a curved Needle, and by Deligation restrain'd the Bleeding, then dress'd it up with Emplasticks as before, concluding, I should have very little more Trouble from that Wound. But two or three Days after, it burst out again, and in my Absence, some other Chirurgeon was call'd in, and dress'd it. Afterwards, at another Bleeding, Mr. Fawcet dress'd him, and at another Time Mr. Arris. The Wound being thus enlarg'd with the crowding in of Dossils, and lying in a very inconvenient Place for Bandage, it bled often, and was dress'd by such Chirurgeons as they could meet with in their Necessity. By the frequent Application of Escaroticks to stop the Bleeding, his Eye was so much inflam'd and corroded, that it was verily believ'd by us, that if he did recover of his Wound, yet that Eye would be lost. But his continual Bleeding thus many Days had so exhausted his Spirits, that there were small Hopes of his surviving it. At the last bursting out of this Vessel, Mr. Ed. Molins, deceas'd, Mr. Fawcet, and myself, met together at his Chamber. We found him lying as dead, with his Hand out of the Bed upon his Breast. We endeavour'd to feel his Pulse, but it not beating, we concluded him dead, and took the Dressings hastily off the Wound. It did not bleed, though it was open. We suppos'd the Blood exhausted. The Artery lay in the Wound torn by the Escaroticks. We took up the Ends of it, and tied them, dressing the Wound with *liniment. Arcei* and a Plaister over it, not believing that the Man would ever recover. But from that Time the Bleeding of the Wound

Wound ceas'd, and it daily incarn'd by very common Remedies, and was soon heal'd, to my Admiration. He was, in less than a Month, perfectly cured both of his Wound and Eye. This Patient had been subject to the like Bleeding formerly upon very small Wounds.

A Butcher living at Westminster was wounded in the 3. Observation of Artery, between the Thumb and Fore-Finger. After he had been dress'd three or four Days by some of his neighbouring Chirurgeons, the Wound continuing to bleed, he came to me late one Night with Dossils crowded in it. I threw them out, and with a Needle and Thread stitch'd up the Artery, and the Wound with it; then sprinkling some of my agglutinative Powders upon the Suture, I dress'd it up with a restrictive Plaister and Bandage, as in the former Wounds is said, and in three or four Times dressing he was cured. But afterwards there appearing some Pulsation extraordinary under the Cicatrix, which proceeded from the too lax Incarnation of the Wound, I dress'd him with a Pledgit dipt in a dulcified Tincture of Vitriol, with good Compress and Bandage. At the next Dressing it was dried and shrivell'd, so that there was no more Pulsation to be observed.

One in the New Exchange had an Aneurisma in the 4. Observation of Palm of his Hand, reaching to the third and fourth Fingers, which at last broke out, and bled at times the an Aneurisma Space of eight or ten Days. I dress'd him with the Tincture of Vitriol abovesaid once in four or five Days, *ken open.* stopp'd the Bleeding, and cicatriz'd it firmly, so that there appear'd not the least Pulsation under it.

A sedentary young Gentleman, of an ill Habit of 5. Observation of Body, was wounded by a Penknife in the Inside of the Calf of his Leg into the Sural Artery. A Chirurgeon dress'd up the Wound, with Dossils dipt in escarotical Powders, *chalcanthum ustum*, &c. with Plaister and Bandage, by which he stopt the Bleeding. The next Day I was consulted, and being inform'd of the Wound, and the Manner of Dressing, I deferr'd the opening of it, and advised him to keep his Bed. He did so, but complain'd then of a throbbing Pain in his Wound, and was very apprehensive of its Bleeding, looking himself often upon the Bandage, and alarm'd me by frequent Messages. The third Morning I met his Chirurgeon there,

there, and looking upon his Leg, found the Bandage all bloody. We took off the Dressings, and saw the Blood fresh in the Rowlers; but in taking off the Plaister, the Dossils came out only foul'd with a bloody *Sanies*, as is usual in like Wounds, after the filling them with such Powders. The Wound and Parts about were inflam'd and swell'd; yet I had much ado to dissuade the young Chirurgeon from dressing it again with Escaroticks, tho' he saw the Accidents arising thereby. But at last I prevail'd, and dress'd the Wound with a Dossil spread with the common Digestive *ex terebinth.* *cum vitel.* *ovi,* sprinkled with *pulv. Galeni*, embrocatting the Parts about with *ol. ros.* *cum aceto,* and applying *emplast.* *è bolo* over all, with good Bandage. By this way of Dressing he was eased, and the Wound at Liberty to discharge the Sloughs and *Sanies* which were made, and choaked in by the former Dressing. If it did not thus digest, yet I concluded that at the next Dressing it would be in our Power to lay open the Wound, and divide the Artery, without hurting the Nervous or Tendonous Bodies near it. But the next Day I found the Patient unsatisfied how his Wound could cure so dress'd, without a Tent, and often murmuring that it would rankle; yet he consider'd pretty easy, and did not bleed during those three Days. The fourth Day at the Opening we found no Blood but what was mix'd with Matter, the Wound also look'd well; yet I complied with the Patient, and put in a short Tent, spread with the Digestive as before. The third Day after we open'd it, and saw upon the Dressing, some fresh Blood follow'd by a thick white Matter, as from a *Pklegmon.* It proceeded from an Apostemation made by the Escaroticks. The Wound thus digesting, I left off the Use of the Tent, and dress'd it with a Dossil, and by good Embrocations, Compress, and Bandage, endeavour'd the pressing out of the Matter: Which accordingly lessen'd each Dressing, but was not well digested, nor free from some small Tincture of Blood. But this proceeded from his ill Habit of Body, he being highly Scorbutical, and subject to Fainting, Loss of Appetite, and pituitous Swellings on his Feet. Upon which Account Doctor *W.* was consulted, and somewhat reliev'd him. After his Wound was cured, I caused a streight Pair of Stockings to be laced

on both Legs, to restrain the Swelling, and prevail'd with him to rise daily: And after he was able to walk, he retir'd into the Country, but hath not yet got off the Disease he heightned by keeping within Doors with this little Wound. Doubtless this Cure had been speedier, if immediately at the first Dressing, his Leg had been bound up with Agglutinatives, and the whole committed to Nature.

A poor Fellow living in the Country was accidentally in letting Blood prick'd in an Artery. The Arm ^{Observation of} swelling and growing painful, he put himself into another Barber-Chirurgeon's Hands, who by unfit Applications rarified the Tumour, and made way to the Extravasation of the Blood; which increasing the Tumour, and rendering it soft, was suppos'd by the Barber to be a Suppuration of Matter. He accordingly open'd it by Knife or Lancet: At which an impetuous Flux of Blood burst forth, to the Quantity of four Flaggons (as they told me.) They made a shift to stop it: But the Bandage being made too hard and unequal, the Arm swell'd, and inclin'd to gangrene. While this poor Man lay thus afflicted, we his *Majesty's* and *Royal Highness's* Chirurgeons, attending the Court, visited him, and prepar'd for the taking up this Artery; or in Case of Failing to cut off his Arm. The Patient being taken out of his Bed, and placed in a Chair towards the Light, we took off the Dressings, and I view'd the Arm; where finding no Gangrene, according to the Report of the Chirurgeon, but rather an *Eccymosis*, we made a Bandage above the Wound, to prohibit the Influx of Blood. One of the Chirurgeons making a Gripe thereon, we made an Incision into the Tumour, on the Inside of his Arm, according to the Length of it over the Artery; and after we had pulled out the coagulated Blood, and laid the Vessel bare, we passed a Needle with a Ligature under the Artery, and tied it, then cut off the Ends of it, and loosen'd the Bandage above: And seeing it bleed no more, we dress'd it up with Pledgits dipt in the common Digestive *ex terebinth. cum vitell. ovi*, applying them with *pulv. Galeni* next the Artery, and lightly filled up the Wound with Pledgits of the Digestive dipt in *ol. ros.* warm; then embrocated the Arm with some of the same Oil, and laid a *diachalcit. Plaister*

Plaster over the Wound and Parts about, also applied *empl. Paracelsi* and *diachalcit.* over the Hand and Arm, which were cedematous. Then with Bandage we began at the Hand, and rowled up to the Wound, taking a turn or two over it, and so rowled up to the *Axilla.* He being return'd again to his Bed, we plac'd his Hand upon his Breast, and felt his Pulse beat strongly in that Wrist. At the next Dressing we found the Tumour dispersed, the Wound fresh, and tolerably digested. We then pass'd another Ligature upon the Artery above the first, and in pulling the first to divide the Artery between the Ligatures, the Artery broke; which was as well. We dress'd it up as before we had done, only leaving out the Powders. At the next opening, finding the Wound in a very good Condition, the Lips of it being digested and contracted, we dress'd it up with *mundif. Paracelsi, &c.* Then seeing it in a hopeful way of Cure, I return'd to *London*, leaving the Patient to my Fellows, who dress'd it successfully the Space of ten Days, without any Appearance of Blood. In some of their Absence the Barber-Chirurgeon dress'd the Patient. Whether it was in wiping off the Knot, or crowding in Dossils, but it burst out again: Yet the Artery being divided, it soon stopt by the Application of *Colcothar,* and from that Time it bled no more. The antient way of Deligation is, as I have already said, by tying it in two distinct Places, and cutting the Artery off between: But the Patient's often fainting, interrupted us in that Work. And truly in this Case, where a Barber was to be intrusted with the Cure, it had been better that the Artery had not been divided; for then it would not have been in his Power to have rubb'd off the Ligature; and before the Wound could have been ready to cicatrize, the Ligature would have fallen off of itself, without Danger of Bleeding.



C H A P. III.

Of Wounds of the Nerves, Tendons, and Ligaments.

NERVES may be many ways wounded, *viz.* by Scission or Puncture. The former way they are usually cut through, and then occasion no new Consideration in Chirurgery, because they wholly cease from Action, and are irrecoverable: But when prick'd by a sharp-pointed Weapon, which kind of Wound is call'd a Puncture, they are much to be regarded. So also Tendons: Not the small Fibres of them, (which are in every Wound of the fleshy Parts,) but the main Body of them, (which usually make up either the Tail or Head of a Muscle.) If you would know whether these are wounded or not, consider the Place wounded, *viz.* Whether near the Joint in the Inside of the Arm or Leg, or the End of the Muscle, or in the Tendonous Parts of the Hand and Foot.

The Symptoms are, great Pain and Inflammation, also *Signs.* a Contraction and Hardness in the Nerve or Tendon. But if the Nerve be quite divided, the Pain is little, only a kind of *Stupor* or Numbness. According as the Nerve is more or less considerable, so also the particular Part is lame more or less.

The most frequent Wounds of Nerves, and most to be taken care of in Chirurgery, being Punctures, I shall instance in them, and chuse the most common, *viz.* Those which are made accidentally by letting Blood. And here, by the way, you must take Notice, that, in letting Blood, sometimes the Apertio[n] happens to be made, when the Skin, by reason of the Bandage, or Position of the Arm, lies equal with the Vein, yet afterwards is not so; or the Apertio[n] is made too small in the Skin, so that Part of the Blood is choak'd in, and lies there extravasated, whence a small *Phlegmon* ariseth: Or it

*Wounds of
the Nerves
and Ten-
dons.*

*Ill Conse-
quences of
Bleeding
not always
from a
Prick of a
Nerve or
Tendon.*

may happen in some that are well let Blood, that yet through the Indisposition or ill Habit of Body, the Part prick'd festers, (as they usually say,) and groweth sore a Day or two after, and if neglected may raise a Tumour, which lying upon the Nerve or Tendon, may at that Time contract the Arm. If a Boil in a fleshy Part be painful, then much more these in the Joints, amongst the Nerves and Tendons. Such Accidents have and will happen to all that let Blood, whether Physicians or Chirurgeons : Which is the Reason that some of our old experienc'd Chirurgeons did, after letting Blood, always apply a Pledgit of *basilicon* upon the Aperture, with *emplast. diachalcit.* over it, which by its digestive Quality secur'd it from corrupting. But we by a contrary Way, as by a little Compress dipt in Water, endeavour to restrain the flowing of the hot *Serum* to the Aperture ; and we should be laught at, if we continu'd that old Method of Dressing. At the Time we let People Blood, they are commonly labouring under some great Fermentation, or apprehend it so : No wonder then if it sometimes fall upon the Part, where it was invited by Bandage. I have been sent for into the Country to a Person, that after a letting Blood, was seized with an *Erysipelas* or bilious Inflammation the whole Length of the Arm. The Aperture in the Vein might possibly be the Cause ; but that Place was not afflicted at all. Dr. Ringal complain'd once of a Chirurgeon, who was so unconscionable, as he said, to ask five Pounds for curing an Arm he had made sore by his letting Blood. But I hope no Person is so ignorant or malicious, to impute such Accidents to a Puncture of the Nerve or Tendon.

For when they are really prick'd, their Symptoms (as you may read in all those that have writ of them) are sudden, with vehement Pain, Faintings, Convulsions, and attended with great Detluxions. They do not terminate presently in Suppuration, but gleet, and will not yield to a simple anodyne Cataplasm of White-Bread and Milk.

All Wounds of the Nerves and Tendons are dangerous, but more or less according as they are of Use. Those of the Nerves are attended with the severest Symptoms, and seize the Patient more suddenly. But whether

whether it be Nerve or Tendon, the transverse Wound is most dangerous, and difficult of Cure.

In order to their *Cure*, there are other Considerations requir'd; and in the first Place, whether the Nerve or Tendon lie open in View, or under Cover-ture of the Skin. If they lie cover'd under the Skin, or *Membrana adiposa*, then you ought to open the Skin, that the Medicaments may penetrate to the wounded Nerve or Tendon. Your Medicaments proper in these Grievances ought to be such as are of hot, dry, and subtle Parts, to consume that ichorous Water which first affects them, and causeth the Putrefaction. In the Beginning use *ol. ros.* with a little Bay Salt, dissolv'd and dropt into the Part scalding hot; upon which may be applied a Pledgit spread with *basilicon* dipt in the same Oil, and the Part embrocated about *cum ol. lumbri-* and *emplast. è bolo* over it as a Defensative. But if the Inflammation and Tumour be great, apply this Cata-plasm: Rx *farinæ bord.* & *fabar.* *an.* ʒ*iv.* *sem. lini* & *fænugræci pulv.* *an.* ʒ*j.* *flor. ros. rub. flor. cham. sambuci,* & *summit. absinth.* *an.* ʒ*ij.* boil these in Wine, or in the common *Lixivium*, adding *oxymel.* ʒ*ij.* *ol. ros.* ʒ*j.* *Misc.* so rowl up the Part gently. If there be much Pain, dress it twice a Day. If the Part requires Medicaments of more drying and subtile Parts, dress with *balsam. sulphuris terebinth.* or else, Rx *ol. sabinæ* & *terebinth.* *an.* ʒ*ij.* *Misc.* or *oleum costinum, rutæ, sabinæ, aneth. scor-pion, &c.* These are all proper Medicaments to dress them with; but *ol. ros.* and Salt have always serv'd my Purpose.

In your Application of Medicaments, you must consider what Degree of Heat and Siccitie is proper for the offended Nerve or Tendon. If in your Use of these Medicaments your Patient feels not the Heat of them, or feels it vehemently, they are not then rightly fitted, for in the former Case they do not enough dry that *Sanies*; in the latter they do inflame the Part. If the Patient feel the Heat moderately, the Medicine is good: But if from the Use of the Medicine the Part itch and smart, and the Aperture made by Puncture gape, then the Medicament is stronger than it should be. If the Hardness go off with the Contraction, and the Lips of the Wound relax, 'tis a good Sign. I shall

shall give you one Observation for the farther Confirmation.

Observation of a Tendon prick'd. A young Chirurgeon having accidentally prick'd a Tendon in letting a Maid blood in the *Saphena*, near the Ankle, he dress'd it up with *ol. terebinth.* hot. Her Pain increasing, I was consulted, and saw the Chirurgeon ready to apply his hot Oils; but upon sight of the Wound, the Lips being turgid and dry, also the Parts about inflam'd, I shewed him his Error, and prevail'd with him to dress it with *unguent. basilic.* warm, and to embrocate *cum ol. ros.* also to apply *emp. diapalm.* malaxed with some of the same Oil, and to forbear dressing it two or three Days; during which she was cured. The over-using hot Oils hath been in these Cases very mischievous to many.

If they yield not to cure by such Medicaments as have been proposed, then you ought to divide them, to prevent worse Accidents, *viz.* Convulsions, Spasms, Gangrene, &c. After which they cure as other Wounds; only require more Care in the Position, and keeping the Member steady, if it be in such a Joint where there are Nerves and Tendons that move contrariwise.

Cure of Ligaments wounded, the same with Tendons.

1. Observation of a Wound in the inside of the Wrist.

The Ligaments require much one Method with the Tendons; only your Medicaments are here to be more drying, as *euphorbium, sulphur, viv. calx lata, tutia,* &c.

A Youth about ten Years of Age, one Day in the Sessions-yard leaning over the spiked Pales to see the Malefactors, was suddenly frighted down by the Marshal's Men: In his falling he was catch'd by one of those Spikes in the Middle of his Wrist, it passing between the Bone and Tendons; he hung thereby till he was taken down. They carried him home, and fetch'd me. I found the Tendons stretch'd out to a great Length, some of them broken and torn in pieces, and one of the Bones of the *Carpus* lying loose in the Wound; which I took out, and cleansing the Wound, placed the shatter'd and over-stretch'd Tendons within it, and made my first Stitch in the Middle, bringing the Lips as close together as I could. Then I made two Stitches more, on each Side one, dressing him up with

with a Digestive *ex terebinth.* &c. dipt in this following Balsam: Rx terebinth. iij. olei olivar. iij. ol. laxrini ʒiv. cinnamom. ʒij. euphorbii, garyophyll. bacchar. jx-niper. an. ʒj. gummi. bederæ, sagapeni, ammoniaci, oponpanatis, galbani, an. ʒjls. myrræ mastich. colophoniae pulv. an. ʒij. distillent. pro usu. Over this I applied empl. è bolo, with a Compres dipt in Oxycrate, and so rowl'd up the Member. Some Hours after I let him Blood, and gave him that Night a Draught of aq. paralyseos with syr. de meconio & aq. cardiac. cochl. iij. He rest-ed ill that Night, and in the Morning was full of Pain. I took off the Bandage, and bath'd the affected Mem-ber with decoct. rad. althææ, malvar. violar. cham. ver-basc. hyoscyam. and applied a Cataplasm over the Dres-sings of farin. bord. fabar. flor. ros. rub. balaust. de-cocted in Oxymel, with the Addition of ol. lumbrie. & rosar. The next Day his Pain was much mitigated, the Tendons all drawn up, and the Stitches loose. I thought to have drawn the Lips close, but found them too painful to admit of it; therefore I cut the Stitches out, and brought them as close as they easily would come, dressing up the Wound as before. After some few Days, the Wound being tolerably digested, I dres'd it with Unguent dipt in the former Balsam, and applied over the Wound empl. dia sulphuris, Rulandii, with Ban-dage and Compres as before. Rx terebinth. resinæ pin. ol. hyperici, an. ʒiv. sarcocollæ, myrrha, thuris, an. ʒij. ceræ. q. s. fiat Unguentum S. A. Thus I happily de-terg'd and incarn'd, and by unguent. tutiæ and my ordi-nary Epuloticks, cicatriz'd the Wound; and some while after he recover'd the use of his Hand.

A Coachman was wounded transverse the Back of his Wrist, deep into the Joint, so that his Hand doubled inward. I caused a Ferula to be placed under his Hand to support it; then searching the Wound, pull'd out many Fragments of Bones; and having cleans'd it, I brought the Lips together by three distin&t Stitches, leav-ing a Vent for Matter in the Ends of the Wound, which were both depending. Then I sprinkled the Powders of Myrrh, Aloes, Thus, &c. upon the Suture, and ap-plied a Digestive *ex terebinth.* cum vitellio ovi on the rest of the Wound, with a Defensative over all, and rowl'd it up. Then I let him Blood, and prescribed him

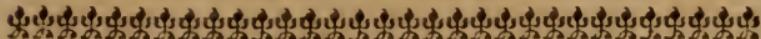
2. Obser-vation of a Wound on the inside of the Wrist into the Joint.

him 3vj. *syr. de meconio* in a Draught of Mace-Ale for his Supper, with Hopes to dispose him to Rest; but he slept little that Night. The second Day after I took off the Dressings, and fomented the Wound and Parts about with an emollient Decoction, as in the former Chapter, and dress'd up his Wound with Digestives as before, embrocating the Parts about with *ol. lumbric.* and applying *empl. e bolo* over the Wound and adjacent Parts. It digested in the declining Ends a little, but continu'd painful, especially in the Fingers. The third Day after, dressing him again, and seeing the Wound digested, I took out the Stitches, and dress'd the Wound with my Digestive of *terebinth.* dipt in my formerly mention'd Balsam, applying a Cataplasm warm over all the Wound and Hand, as in the former Observation hath been set down; then rowl'd up the Member again. At the next Dressing there appear'd more Inflammation; yet the Wound was not altogether well digested, nor did the stitch'd Lips seem to incarn, but thrust forth a soft white Flesh; wherefore I cut the Stitches, and digested with *Merc. præcipitat.* and laid Pledgits spread with *mundif. ex apio*, with a Cataplasm, as before, over all. Thus I deterg'd, and afterwards incarn'd with the common Sarcotick, and with *calx lota* cicatriz'd it. Then I put on a Catagmatick Emplaster, and by the use of a laced Glove, scatter'd the pituitous Swelling, and strengthned it; yet it continu'd long painful, and so extremely weak, that he was necessitated to support it a long Time by wearing the *Ferula.* Since the writing of this, I am inform'd he continues in the same Service; his Wrist is stiff, but serves him to drive his Coach.

3. Observation of a Finger bit off by a Horse.

A Gentleman aged 54 Years, of an ill Habit of Body, passing in the Street by a Coach, one of the Horses snapt off the End of his Finger with the Glove. I dress'd the Stump with the common Digestive dipt in a little *ol. ros.* warm, and with *emplast. diachalcit.* mallaxed with a little of the same Oil, and rowl'd up the Stump. This Patient kept not his House with this little Hurt, but came to me to be dress'd once in two or three Days, or dress'd himself; he not thinking it worth the Observation of Diet, Bleeding, or the like. One Day he came to me, complaining that his Finger would not heal.

heal. I look'd upon it, and seeing an undigested crude *Ichor* dropping from it, and the Parts about blister'd; I scarify'd them, and dabbed the Wound with *ol. terebinth.* warm, strewing *Merc. præcipitat.* over all, and dressing it up with Pledgits dipt in *basilic.* &c. then rowling it up with *empl. diachalcit.* That Night I went to his Lodging with a Fomentation and other Medicaments prepar'd for a Mortification, but found it check'd; so I continu'd the Application of *unguent. basilic.* and *ol. terebinth.* and afterward let him Blood, and purg'd him with *infus. senæ,* &c. After the Wound was well digested, I incarn'd and cicatriz'd the Stump by such Medicaments as in the former Observation have been set down. Thus sometimes great Mischiefs attend little Wounds, thro' the Contempt some of our Patients have of them.



C H A P. IV.

Of Wounds of the Face.

A Lady was wounded down the whole Length of the Forehead to the Nose; also transverse the Left Eye-brow to the Temporal Muscle; her Eye and Face were also much bruised. It happen'd to her travelling in a Hackney-Coach, upon the jetting whereof she was thrown out of the hinder Seat against a Bar of Iron in the fore-part of the Coach. At the first Sight of the Wound in her Forehead, seeing the Bone bare, and her self so disturbed, I doubted whether I should stitch it, or keep it open with Dossils; but seeing no Fissure or Inequality in the Bone; and considering the Deformity in that Place would be great, I brought the Lips of the Wound close together with one Stitch, and dress'd it with Sarcoticks, resolving, if any Symptom prognosticated ill, to cut the Stitch, and lay it open again; but if there were none, then at the next Dressing to bring the Lips of the Wound nearer by dry Stitches. On the Eye-brow I made four Stitches, at such Distance as they

1. Observation of
Wounds in
the Fore-
head and
Eye-brow.

they might be able to retain the Lips together, taking in a triangular Piece of Skin that was divided by a Wound above it, which render'd it not unlike a double Hate-Lip. Then I dress'd up the Wounds with *Artemis's Liniment* and *empl. è bolo*, with a Compress dipt in Oxycrate, and made my Bandage over all. Having thus dress'd her Wounds, I caused some *aq. ros. rub. cum alb. ovi* to be beaten together, and dropt in her Eye; then applied soft Folds of Linen wet in the same Mixture over that diseased Eye, and an *empl. è bolo* over her Cheek, forbearing the Bleeding her that Night, in Consideration that she had bled the Space of five Miles in her returning back to *London*. The second Day after, I took off the Dressings, and finding less Suspicion of Fracture or Fissure in the Wound of her Fore-head, I brought the Lips of that Wound together with dry Stitches, and strengthen'd those Sutures of the Eyebrow by the same Medicament, lest the continual Motion of the Lid should relax them: Then I dress'd it up as before, and made the Bandage begin behind, bringing both the Heads of the Rowler forward, passing one by another, to press the Lips of the Wound in the Forehead close together, and dress'd her Eye with *aq. pomor. matur.* wherein a few Grains of Vitriol were dissolv'd; by which I remov'd the Suffusion upon the *Cornice*. Then I applied upon her bruised Cheek Pulp of the Roots of Orpin beaten in a Mortar, with the White of an Egg. Two Days after I dress'd her again, and finding that the dry Stitches kept those Lips of the Wound close together, I cut off the other, and dress'd her with Sarcotick Powders, which supplied the Place of Epuloticks; and that Morning I let her Blood in the Arm about ten Ounces, and purg'd her the Day after with *infus. senæ rhab.* &c. By this the Defluxion was remov'd, and in the space of seven Days the Wounds were all perfectly cured, and she return'd back the eighth Day.

2. Observation of a Wound in the Right Check. A Servant of a Nobleman was wounded on the Right Cheek over the *Os zygoma*, down the Muscles of the same Cheek. In cleansing of the Wound, I felt a Piece of that Bone, which had been cut off by a slanting Blow; it hung only by some fleshy Fibres in the Wound. I took it out, and, in consideration the Part would not well

well admit of Bandage, I made two Stitches, bringing the Lips of the Wound even together, then sprinkled the Suture with Sarcotick Powders, and dress'd it up as the former. The third Day after, taking off Dressings, and finding his Wound agglutinated, I cut out the Stitches, and dress'd him with some of the same Agglutinatives as before. Two Days after, dressing him again, I found his Wound perfectly cured.

Whilst I serv'd amongst the *Dunkirkers*, where *Snick and Snee* was as it were a Fashion, I had much of this sort of Work; and, for your Diversion, shall set you down one Instance in that kind.

Whilst our Squadron rode at Anchor in the *Groin*,^{3.} Observe there came in some *Hollanders*, under the Notion of *vation of Hamburgers*, with three Ships new trimm'd up for the a Dutch King of Spain's Service. A Boatswain of one of these Ham-Ships happen'd in Company ashore with some of our burgher, Men, where drinking together, the *Hollander* began to mark'd prate of Religion, upbraiding one of our Men for wear- with a Cross ; and after a while, growing more heated with Drink, he became quarrelsome, and swore *Sacra-* the Right *Cheek*. *ment* he would not wear a Cross ; no, the Devil take him, repeating it often. One of our Men beat him down, and fell with him ; then kneeling upon his Breast, and holding his Head down, he drew out a Knife sticking in his Sash, and cut him from the Ear towards the Mouth, then from the *Os zygoma* to the nether Jaw. Now, said he, *you shall wear a Cross, that the Devil do not carry you away*. I was sent for from the next House as a Friend to that Religion, and stitch'd the Lips of the Wound close together ; then sprinkling them with a little *puvl. Galeni*, applied Pledgits with a sarcotick Unguent, and with Astringents and Bandage dress'd him up. The next Morning he was let Blood, and the third Day after I took off the Dressings, and finding the Wound as it were agglutinated in the Slits, I cut out some of the Stitches, sprinkled the Wound as at first, and dress'd him up with Sarcoticks, with Compress and Bandage. The second Day after I dress'd him again and cut out the remaining Stitches ; and in a Dressing or two more cur'd him. This being the Work of Nature, who rarely faileth in acting her Part, if we perform ours, in retaining the Lips close together, and defending

fending them from Fluxion. The Patient was well pleas'd with his Cure, tho' there remain'd some Marks of a Crost. These sort of People wearing them with much Pride in their Faces, as Marks of their Courage.



C H A P. V.

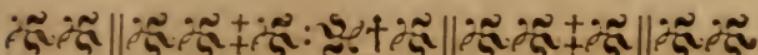
Of Wounds penetrating the Oesophagus and Aspera Arteria.

Wounds penetrating the *Oesophagus* and *Aspera Arteria* require to be stitch'd close, especially those of the *Oesophagus*, where the Sustenance and *Saliva* so continually presseth into it. Therefore if your Stitches slacken before the internal Wound be agglutinated, you ought to make new Stitches, or pass Needles or Pins thro' the Lips of the Wounds, and with strong Thread twisted about them, as in a Hare-Lip, keep them close together, till the Wound be united. During which, dress it up with Agglutinatives, and prescribe a thin Diet; so shall you cure the Wound in few Days: wheras otherwise observe what followeth.

Observation of a Wound in the Gullet.

A Child of about six Years of Age, playing with a wooden Dagger, fell upon it, and wounded himself into the *Oesophagus* or Gullet, so as his *Saliva* frothed out of the Wound. I being fetch'd, stitch'd up the Wound, and applied Astringents, with Compress and retentive Bandage, then put him into Bed, and let him Blood in the Arm, advising a Lambative of *album. over-rec. cum sacchar. alb.* to be taken as Necessity should require, with Directions to abstain from all other Sustenance till the next Morning. At which time visiting him again, I was told their Chirurgeon had taken off my Dressings, cut off the Stitches, and given a greater Liberty in Diet. I wonder'd what peculiar Art he had in

in curing that Wound. But about a Month after, I was inform'd he had been foil'd in the Cure, and had left it to Nature; and that the Child was fed with Pudding, and such soft Food, part whereof came daily out at his Wound.



C H A P. VI.

Of Wounds of the Limbs.

ONE of our Mariners in *Spain*, fighting on shoar, ^{i. Observ-} was thrust with a Rapier into the outside of the ^{ation of a} Arm, nigh the *Biceps*. A Chirurgeon in the Town see-^{Puncture of} ing him bleed much, stitch'd the Wound close, and ap-^{the Arm.}plied his Restrictives, rowling up the Part well. After three or four Davs, the Patient came aboard, and be-
ing in Pain, desir'd me to dress him. The Arm being swell'd and inflam'd, I cut the Stitches open, and gave vent to a bloody *Sanies*, after which follow'd a diges-
ted Matter. Finding by Search with my Probe the Wound wanted little of passing through, I embrocated and dress'd it up with a short Tent arm'd with my com-
mon Digestive, and endeavour'd by good Bandage to cure it. But it not yielding thereto, I passed a Seton-
Needle through, discharging the Matter downward; and after that Apertio was digested, I dilated it, and kept a Tent there a few Days, during which, the upper Part of the Wound heal'd up; and the Wound below di-
gesting well, and the Matter daily lessening, I also heal'd that up. This I insert, to shew you that such Wounds ought not to be stitch'd, but dress'd up with Astringents, Compress and Bandage; for so these Wounds in a good Habit of Body, with Compress and Bandage, do frequently agglutinate in a few Days; whereas dress'd by Tents, they are of longer Continuance, and render'd at last difficult of Cure.

2. Observation of a Wound in the Thigh. While I was in the King's Service in the Time of a War in the West-Country, I was fetch'd to Captain M. who, in fighting in a Duel, was run through the Thigh with a broad Sword: I was also sent for at the same Time to the other. I hastily dress'd this Officer's Thigh with Pledgits spread with Sarcoticks, and some astringent Powders, mix'd with the Whites of Eggs, applying them over both the Orifices, and bringing the Lips of them close, with Compress and Bandage, and so left him to be by his Servants put to Bed. From thence I went to dress the other, who had many little Wounds on his Fingers, Hands, and Head. At my Return, I visited my former Patient, whom I found in his Bed with little Pain. The second Day after, I attended him, and finding all in good Temper, without Pain or Swelling, I dress'd the Wounds as I had done before, there being good Signs that they would heal up by Agglutination; for there was little either of Matter, Pain, or Swelling. If it had appear'd inflam'd with Tumour or Pain, I ought then to have dilated the Orifice most distemper'd; and if they had both suffer'd, I might have kept them both open with small short Tents spread with the common Digestives, and have let him Blood, and proceeded as in a Body ill habited: But there was no Need, there only requir'd a quiet Position of the Part; which he submitted to, and was happily cured in seven or eight Days. This was really perform'd by the Balsam of his Blood, I neither bleeding nor purging him in the Time of his Cure.

3. Observation of a Wound in the Thigh. A fat Gentleman came from Rochester wounded in the Thigh with a Tuck. It was much inflam'd, by reason of the Tent in it, which was very long; his young Chirurgeon supposing the Wound could not be cured, unless the Tent reach'd to the Bottom of it. I threw out the Tent, and dress'd the Wound with a Pledgit of *unguent. basilic.* embrocated it with *ol. ros.* and applied *empl. è bolo*, then let him blood. He being feverish, I also prescribed a Clyster, and sent him an Anodyne Draught to dispose him to Rest that Night. The next Day I found him in good Temper, and his Wound inclin'd to heal. I dress'd it as the Day before, and advis'd him to keep his Bed three or four Days. About two Days after, I visited him again; and taking off the Dressings,

Dressings, saw his Wounds perfectly cured: So it continued, and he walked abroad the next Day.

A Person was wounded in the inside of the Arm, the 4. Observation of a Sword passing over the Joint, slanting to the outside of the Arm. He was first dress'd by a Chirurgeon near the Place where he was hurt, and had bled much. The next Day he complaining of Pain, I open'd the Wound, and found it tented at both Orifices, the Arm swell'd, and a little disturb'd; as Wounds in that Place are subject to be, when the Blood is shut in by Tents, and not dress'd rationally by Astringents and good Bandage. The Swelling was most between the two Orifices, and appear'd afterwards to be the Blood choak'd in by the Streightness of the Bandage, and was not likely to yield otherwise than by Suppuration. I fomented the wounded Member with Discutients, and kept both the Orifices open with small Tents dipt in the common Digestive, embrocating the Parts about *cum ol. ros. & gutt. aliquot aceti*, and applying over all *empl. è bolo*. The third Dressing there appear'd Blood from that Orifice in the inside of the Arm. I fill'd it with Præcipitate upon a Dossil, and dress'd the Wounds up as before; then acquainted the Patient with my Thought of opening the Swelling between the two Orifices, there being no likelihood the Matter could discharge itself by either of them; yet it was not safe to heal them up. Wherefore I open'd the Tumour lying between them by a little Caustick, and discharg'd a grumous Blood with a corrupt Serum. From that Time I left off the Use of Tents, and heal'd that Wound up in four or five Days; and as the Escar separated, the Ulcer digested, and I cured that latter Opening soon after. That the Bone was bare under the Tumour, may, I suppose, yet be felt, from the Adhesion of the muscular Flesh to it.

A Person was wounded in the outside of the Right Leg below the Gartering-place, the Wound running upward. After six Weeks dressing by the neighbouring Chirurgeons, the Wound being much disturbed by a Flux of Humours, I was consulted, and found it sinuous (some two Inches) upward, and accompanied with Inflammation and Tumour. The Small of the Leg and Foot were oedematous, and the whole Member so weaken'd by the Influx, that it was neither able to assimilate its

its Aliment, nor yet to resist the Crudities that fell upon it, and so was like to be of difficult Cure. In order to which, I laid open Part of the *Sinus* by Incision, and deterg'd the Wound with *mundif. Paracelsi.* mixt with *Merc. præcipitat.* embrocating the Parts about with *ol. ros. cum aceto,* and applying *cerat. Galeni* over the inflam'd Tumour. I fomented the oedematous Tumour with a Decoction of *absinth. scord. flor. sambuci, cham. ros. rubr. bacc. myrtill. & balaust.* and applied over the Swelling a Mixture of *empl. diachalcit. & stict. Paracelsi,* with good Bandage; not renewing those Dressings more than once a Week, to give a Breathing to it. By the aforesaid Method of dressing, that Part of the Wound which I had laid open, deterg'd, and the Inflammation and Tumour remitted. I afterwards divided the remaining *Sinus*, and deterg'd it as the former, and with *unguent. diapompholyg. &c. cicatriz'd* it, by the Help of a lac'd Stocking, in the Space of about a Month. This Person had been long kept in his Chamber by his Wound; and now supposing himself well, he rid to his Country House, (unknown to me;) but that Night his Leg swell'd much, and the Cicatrix being scarce confirm'd, brake out again: Upon Sight whereof he return'd back the next Day, and sent for me. His Leg being inflam'd, and the Cicatrix fretted quite off, I fomented the Member *cum decoct. malvar. violar. plantag. solani, & flor. ros. rub.* and endeavour'd by the Application of *basilicon, &c.* to digest it: But it not yielding thereto, I applied Refrigerants on the external Parts, and a fine Lawn wet in a Solution of *troch. alb. Rhaf.* made in *decoct. plantag. equiseti, &c.* over the Excoriation, also *unguent. alb. camph.* over the Lawn, upon Pledgits somewhat distant from one another, lest the Matter should be shut in by the Adhesion of them, and fret the *Cuticula* more off. Thus I dress'd it twice a Day, he keeping his Leg upon his Bed to prevent Defluxion. By this Method the Heat and Acrimony of the Humour being mitigated, I applied over the Lawn Epuloticks more drying, viz. *pulv. corn. cerv. usti, &c.* and at last, with much Difficulty, cicatriz'd the Ulceration: Whereas if this Wound had been treated methodically in its Recency, it might possibly have been cured in few Days by Agglutination.



C H A P. VII.

Of Wounds of the Breast.

Wounds of the Breast are penetrating, or not. If they do penetrate, then we are to consider the Depth; whether it be only between the *Mediastinum*, in the hollow Cavity of that, in the lower Part of the Breast; or whether it penetrate into the Cavities of the *Thorax*, or what the Parts are that be hurt. How the Breast is circumscrib'd with the Symptoms of each Part when hurt, you may find in the following Discourse of *Gun-shot*.

The Signs of Wounds penetrating are discover'd by *Signs of penetration* the Proportion of the Searching-candle, or Probe, which enters into the Cavity. You may also perceive *Wounds*. when it penetrates the Cavities of the *Thorax*, by laying a Down-feather upon the Wound, or by holding a lighted Candle near it, the Patient holding his Breath the whilst. In this Case, the Wind (or Air) will move the Feather or Flame, if it do not blow away the one, and extinguish the other. The Air also makes a Noise in its passing forth. Sometimes it is discover'd by the Quantity of Blood discharg'd by the Wound or Mouth, or both, with Difficulty of breathing.

Wounds in the hinder Part of the *Thorax* are reck-
on'd dangerous, by reason of the Nerves and Tendons; *Prognostick*. and if they penetrate that Way, there is another Danger from the great Vessels of Blood, which are nearer to the Weapon in this Case, than in those Wounds which are made forward: Yet all Wounds in the Breast are dangerous, by reason of the continual Motion of the Lungs, and of the Blood that falls down on the *Diaphragma*, and corrupts it. If the Lungs be wounded deep amongst the great Vessels, though they escape the first nine Days, yet they commonly terminate in a *Phtisis* or *Fistula*.

Cure.

A Wound in the external Part of the Breast is cured as a simple Wound. If it penetrate, you are to endeavour, first, the restraining the Blood; then that the extravasated Blood be discharg'd; and that either by the Mouth, by Expectoration, or by the Wound, or by Urine. The Way by Urine, *Fabr. ab Aquapend.* says, is by a Branch of the *Azygos*, which, saith he, passeth near the *Diaphragma*, by the Spine, to the Emulgents. Those that own the Circulation, will hardly allow of his *Hypothesis*. However, if the Matter of Fact be true, that there is sometimes a Discharge by Urine, which I confess I have not yet observ'd in my own Practice, it will be reasonable to propose, as he doth in this *Cafe*, Diureticks, as *decoct. capill. Veneris, polytrich. rad. petro-selin. beton. apii, fœniculi, asparagi*; also Ptifans, with *ol. sulphur. vitriol.* Barly-cream, Emulsions, &c. to temperate the Blood. The Ancients gave *acetum* with warm Water, to restrain the present Flux, and to dissolve the concreted Blood.

The second Way is by Expectoration; and thereto serve *decoct. pectorale, Lohochs, syr. capill. Ven. jujub. gly-cyrrhiz. oxymel, &c.* whereof the *Pharmacopœia Lond.* is full. This I have mention'd for their Sakes, who cannot have a Physician. But here I leave this Work to them, those Cures consisting much in their well ordering and prescribing internal Remedies; contenting myself in the dressing of the Wound, as it appertains to Chirurgery. In the treating of which there is a Question,

Whether the Wound is to be kept open or not. Whether the Wound should be kept open, or agglutinated? They that are for a speedy Agglutination, do urge it, lest the internal Air corrupt the Parts within, and the Heat expire. They that propose the keeping them open, do design thereby a readier Discharge of Matter. For, saith *Aquapendent*, if the Matter be to be discharged by Urine, it must pass into the Substance of the *Pleura*, then into the Vein *Azygos*, so into the Emulgents, then to the Kidneys, and through the Ureters and Bladder: If by Expectoration, then it must also first pass into the Substance of the Lungs, then into the *Aspera arteria* or Weasand, and from thence be coughed up, and spit out by the Mouth.

The Author's Judgment.

In my Practice, in these Wounds of the Breast, I consider the Wound, how it is capable of discharging the

the extravasated Blood or Matter. If it be inflicted so, that the Blood or Matter may be thereby discharged, then it is to be kept open, the Welfare of the Patient depending mainly upon the well-dressing and governing it; but if it do not lie well for Evacuation of that extravasated Blood, then it may do hurt, and so ought to be healed up.

A Person of about 23 Years of Age, of a good Habit ^{1. Observation of a} of Body, being wounded into the Breast, there follow'd immediately a great Effusion of Blood, almost penetrat-^{ing Wound} to the exhausting of his Spirits. Mr. R. Chirurgeon, and myself, were presently sent for. We found him ^{of the} lodg'd in an Inn near *Vaux-hall*, and view'd his Wound. It was four Fingers above the *Cartilago ensiformis*, a little to the Left Side: He had a small Pulse, and fainted often. Dr. *Wedderborn* and Dr. *Will. Denton*, came in while we were providing Dressings. The Wound was large and penetrating. We made a soft Tent, with a ^{How to order} Thread fasten'd to it; which in these Wounds you must ^{der Tents} be sure to do, lest you lose it in the Body. This Tent ^{in penetratin-} we dipt in a Mixture of Powder composed of *bol. Ar- men. sang. dracon. thus, mastich. &c. cum albumine ovi*, ^{Wounds of the Breast.} and applied over it a Pledgit spread with the same; also *empl. è bolo*, with convenient Bandage. The Physicians prescribed internally such things as restrain'd the Bleeding, and were proper to resolve the concreted Blood, and withal to relieve his fainting Spirits. That Night he rested ill. The next Day when we met, seeing him labour under great Difficulty of breathing, with Pain above the *Diaphragma*, his Pulse quick, little Urine, and that high colour'd, we agreed he should be let blood presently; which was done accordingly in the Left Arm. The Blood flowing with a quick Stream, we took away about six or seven Ounces, a mere Serum; but the Patient was reliev'd by it. We then took off our Dressings to look upon the Wound, whereupon we found some Blood and *Sanies* discharg'd. We dress'd him with *terebinth. lot. in succo lamii*, adding some of the former Powders, *cum vitel. ovi*, upon a Tent as before, with a Plaister and Bandage over it. Thus we continued to dress him, until we saw the Bleeding cease. After which there was nothing for us to do, but to fur-

ther the Discharge of Matter from within, by keeping the Wound open until it lessen'd, and the ill Symptoms went off; the casting in of liquid Medicaments, which are not easily to be gotten out again, being very destructive. Therefore we diligently attended in assisting Nature, by keeping a Way open for the Evacuation of what was extravasated and corrupted within the Cavity, committing the Cure to her; who indeed acted her Part so well, that in few Days the Wound agglutinated within: and we thereupon leaving off the Use of the Tent, cured the external Wound in few Weeks by the common Sarcoticks, leaving him in perfect Health, which he yet enjoyeth.

2. Observation of a Wound in the Right Breast.

Another Person was wounded into the Breast below the fourth Rib on the Right Side. He coughed up much Blood at times. Sir *Francis Prujean* was his Physician, who prescribed him Ptifans, pectoral Decoctions, &c. by which and frequent Phlebotomy the Symptoms went off. After the Wound digested, the Patient rambled abroad, and was cured by such Dressings as I left for him at his Chamber, I seeing him no more until he was wounded again.

3. Observation of a Wound in the Right Breast.

Another was wounded in the Right Breast, coughing up much Blood, with great Pain and Difficulty of breathing. I took away 10 Ounces of Blood presently, and ordering him (it being then Night) some *syr. de meconio & jujub.* in a Draught of *aq. papaver.* with a few Drops *spir. sulphuris.* He slept well that Night, and against the Morning he had *decoct. pectoral. com.* (the hotter Herbs left out) sweetned with *syr. de. ros. sicc. & jujub.* of which he drank in the Morning, and at other times as he listed. By his Disorder he frequently relaps'd, and coughed up Blood at times. I let him Blood as often, and kept his Wound open and digested. But he relapsing again, I began to be sick of him, and dealt with him to send for a Physician. Sir *Ed. Graves* was consulted, who saw his Wound almost cured. We repeated Venæsection; and from that Time he recover'd, and continu'd well.

4. Observation of a Wound in the Left Side.

A Footman was wounded into the left Side: He cough'd Blood, and discharg'd much by the Wound. A Servant of mine dress'd him with a Tent, by which the Bleeding was stopt from flowing thereout; and by letting

ting him Blood in the Arm, the coughing of Blood was check'd. The other Symptoms were afterwards remov'd by Dr. Walter Needham's Prescriptions. Some few Days after, a Tumour arising about the Wound, I gave him a Visit, and felt the swelled Parts crackle under my Fingers. Concluding it Wind got out from the Cavity within the *Thorax*, I made an Incision into the Swelling about an Inch long, by which the Wind was discharg'd. We digested the Wound *cum terebinth*, &c. and kept it open two or three Dressings, till the Penetration into the Breast was incarn'd; then less'n'd the Dossil, and heal'd it, as in the former Observations hath been shew'd.

A Gentleman of about 23 Years of Age, of a full Body, was wounded in the Breast and Right Arm. He was carried into the next House, and dress'd by a French Chirurgeon. The next Morning I found him much afflicted with a Cholick and *Dysuria*. These Symptoms happening thus upon his Wounds, gave some Occasion to think they proceeded from the Wound inflicted on the Breast; but were indeed the Effects of his ill Habit of Body, and manner of living; for he had been a Good-Fellow, and at that time over-warin'd with Drink, and had lain upon a Pallat that Night in a cold Chamber, which together seem'd Cause sufficient for his Complaint. However, Bleeding was repeated, Fomentations were also applied to the *Abdomen*, Clysters administer'd and all things done which were proper in such Cases; Purging excepted, in Consideration of his Wounds: The one whereof was said to be on the Region of the Heart, and the other in the Artery of the Arm. The third Day after, we prepar'd to dress his Wounds, and found the one lying upon the *Sternum*, penetrating under the Skin to the *Cartilago ensiformis*, whereout we pull'd a Tent near two Inches long, and proportionably big. The other was a Puncture on the outside of the Arm, with a Tent crowded into it. I dress'd this latter Wound with a Pledgit spread with a Digestive *ex terebinth*. & *empl. è bolo*, and in two or three Dressings cured it. To the other, I applied some of the same Digestive upon a small Tent; and having embrocated the adjacent Parts with *ol. ros.* I used *empl. è bolo* with Compress and Bandage, and design'd that way

5. Observation of
Wounds in
the Breast
and Right
Arm.

way to cure it. But the *Sinus* being depending, and the Wound disturbed by the unreasonable great Tent, hinder'd the Agglutination: Wherefore, after a Dressing or two, I snipt it open with a Pair of Probe-Scissars, and cured it by incarning, &c. The Wounds appearing so inconsiderable, the Patient was purged, and the *Dysuria* remitted: But a few Hours after, he was seized with a Pain in his Left Hip; for which he was again let Blood, Plasters were applied, and Purgings repeated. But after all, a *Diarrhœa* happen'd, which freed him of the Sciatick Pain. Being thus relieved, he observ'd no longer the strict Rules prescribed him, but took the Liberty to eat and drink as he listed, and attributed his Recovery to that.

6. Observation of a Wound thro' the Body.

A Person run through the Body, the Breadth of three Fingers, under the Right Clavicle, and out below the *Scapula*, was first dress'd by a Chirurgeon near the Place where he was wounded. I came some Hours after, and found him in Bed faint and weak, but without Pain or Difficulty of breathing. The next Day I met Dr. *Bacon*, Physician, and Mr. *Shocque*, Chirurgeon to his Highness Prince *Rupert*. The Patient had rested very ill the preceding Night, his Wound in his Back had bled very much, even quite through the Bed: He had also foul'd many Napkins in coughing up Blood. We took the Dressings off the Wound in his Breast, from whence there had been some Blood discharg'd, and more came out soon after. I dress'd up the Wound with a short Tent dipt in a little *terebinth. cum farin. volatili*, and a few of our Agglutinative Powders mix'd with the Yolk of an Egg, and applied *empl. diachalcit.* over it. The other Wound under the *Scapula* was painful; but so small, that it was not reasonable in our Judgment to keep it open. We therefore laid a Pledgit of the same Mixture, with a Plaster upon that, and from that Time dress'd it no more; but dress'd the Wound in his Breast daily, and repeated Venæsection as Occasion offer'd. The third Day he cough'd up Blood, and some little issued from his Wound that Day and the next. Four or five Days after, I waited upon him to his Lodgings in *London*. By the Way he cough'd some Blood, and so more or less Day and Night: But by the Care of his Physicians it lessen'd daily; and his Wound being

being better digested, I kept the Orifice open by a short hollow Tent made of a Sparadropē, which was compos'd of *resin. pin. gum. ammoniac. bdellium, galban. terebinth. & cera*, with *pulv. ireos*, dipping it in a little *mel. ros.* This Way of Dressing I continu'd, until the coughing of Blood diminish'd from 12 Napkins in a Day and Night to 10, 8, 7, 4, 2, 1; yea, to 1 in a Week. After I saw no Blood one way or other, nor any Symptom of Ill, I desir'd his Physicians and others might be consulted together, and severally; and having all their positive Judgments for throwing out the Tent, and healing up the Wound, I did so; and in a Week more cured him. Five or six Days after, he sent me his Thanks by his Servant: After which I made him a Visit; and there met Dr. *Willis*, who enquiring of me, whether his Wounds were cur'd? I desir'd the Patient that he would shew the Doctor whether they were or not. He presently stript himself of his Shirt, and shewed the Doctor, who both saw and felt the *Cicatrices*, and replied, They are well.

A young Man wounded in the Breast, labouring under 7. *Observation of* very great Pain and Difficulty of breathing with a Cough, sent for me late one Night, and shewed me some little *a Wound* Blood he had then cough'd up. He had been wound-*in the* ed the Night before by a Man standing at a Door some *Breast.* Steps higher than himself, as it were over him, thrusting his Rapier into his Breast, within two Fingers Breadth of the Right Clavicle, downward into the Lungs. The Patient ran into that House bleeding much, and was seized with such Difficulty of breathing, that he was forced to stretch his Arms at length over his Head, without which doing he could not breathe. He had been let blood twice, and prescrib'd Ptifans, &c. but for all this, he was very little reliev'd. I presently let him blood about 10 Ounces, and order'd the Apothecary to give him a Draught of *aq. papaver. cum syr. de meconio & de ros. siccis*, with a little *aq. Saxonæ frigid.* and against the next Morning appointed them to send for a Physician to meet me. They did so. When I came in the Morning, I found the Patient marvelously reliev'd, and resolv'd to remove (he being then in *Scotland-Yard*) to his Lodging in *Wildstreet.* In the Presence of his Physician Dr. *St.* I took off the Dres-*sings,*

sings, found his Wound small, and heal'd up within; but not cicatriz'd: Which if it had, yet the Wound within was so much below this without, that it was not capable of discharging the Matter, and so not worth my Attendance, their Cure indeed consisting in internal Prescriptions. However, he continu'd me with his Physician; and we bled him again, taking away about eight Ounces of Blood, and proceeded in the Method of Cure usual in such Cases. That Afternoon the Patient, unknown to me, pursued his Intention of removing to his old Lodging in *Wildstreet*, where going up three Pair of Stairs to his Chamber, he relaps'd into the former Difficulty of breathing with Pain, and cough'd much Blood. The Morning after, we met there together again. The Patient seem'd to us quite spent, labouring under great Oppression; and by his Pains about the *Diaphragma* and Back, there was Suspicion of extravasated Blood. We bled him some four or five Ounces more, and repeated Embrocations, Lohochs, pectoral Decoctions, &c. and got off this Difficulty in five or six Days: then I left him. But after that, by Disorder he relaps'd again; yet was freed again the same way by his Physician, and recover'd to be hang'd at last.

The Author's Observation concerning the Discharge of the Sanies of the Breast by Urine.

Of all these wounded Patients, and many more I have help'd to cure, I never saw any that I could say pass'd, their Disease by Urine, nor many of them that vented their Urine well during the Time of their lying under these Wounds; nor have I often seen them who recover, expectorate any such Quantity of Matter, as might be thought to proceed from the great Quantity of Blood extravasated. They cough'd fresh Blood most of them, like to what they discharg'd from their Wounds, but more florid.

C H A P. VIII.

Of Wounds of the Belly.

WE shall now say somewhat of the Wounds of the *Belly*: The Description whereof you will find set down in the Discourse of *Gun-shot Wounds*, with the Symptoms that attend the Wounds of each particular Part that shall happen to be hurt in it.

Wounds of the Belly either penetrate, or not. The *Difference*. Wounds not penetrating; are such as reach no farther inward than to the *Peritonæum*. If the *Peritonæum* be also cut through, it is reckon'd a penetrating Wound; in which Case, if the Wound be large, the *Omentum* or Intestines slip out. These penetrating Wounds are also frequently accompanied with Hurt of some of the contain'd Parts, *viz.* the Intestines, Stomach, Liver, Spleen, &c.

If the Penetration be large, it is discover'd by the *Signs*. thrusting out of the Kell, or Gut. If the Wound be small, you must search it with your Probe. What internal *Viscera* are wounded, may be guess'd by the external Part hurt, but more certainly by their peculiar Symptoms.

Wounds not penetrating are without Danger. Those *Prognos-* in the Middle of the Belly are worst, by reason of the *tick*. nervous Body that lieth there, and consequently more painful to be stitch'd, and difficulter of Cure, by reason of the Intestines and Kell pressing most upon that Part. If any of the internal *Viscera* be hurt, the Danger is great, all such Cases being accounted mortal.

Wounds not penetrating, are cured as other Wounds *Cure*. of the Flesh; but those which do penetrate, require other manner of handling. If the Intestines or *Omen-* *tum* do thrust out, you must speedily reduce them, lest the former inflate, or the latter over-cool and corrupt. But if the Gut be so pust out that you cannot return it *in*,

in, you ought to foment it with warm Water, Red Wine, or some discutient Decoction *ex summi. origan. puleg. fol. beton. salviae. flor. cham. sem. anethi, foenic. dulc. anis. &c.* If by such means you cannot reduce it, you must enlarge the Wound by Incision, and restore it to its Place.

If the *Omentum* be slipt out and tainted by the Air, make a Ligature above the solid Part, and cut it off; then stitch up the Wound, leaving the Ends of the Ligature hanging out of it to cast off: But if it be fresh and warm, reduce it with your Fingers. Authors have propos'd several Ways of stitching these Wounds, which I shall not trouble you with; but advise you to make your Stitches so deep, that the *Peritoneum* may be united with the Flesh: for if you fail therein, a *Hernia* must necessarily succeed.

If the penetrating Wound be so small that neither *Omentum* nor Intestine slip out, (as it frequently happens when they are inflicted by Tuck or Rapier,) you may then consider what Symptoms there are of the internal *Visceræ* hurt: and if there be neither Inflation of the Belly, Cholick, Vomiting, or ought extraordinary by Urine or Stool, you may conclude all well; and being so, your best Way will be to heal up the Wound by Agglutination: for by dressing it with Tents, you may cause Disturbance; and by exposing it to the external Air, Putrefaction, Cholick, &c. may ensue. Therefore I think it necessary that these Wounds be heal'd with all Expedition, and that the Patient do keep his Bed the while; for in fitting up, the Weight of the Bowels will stretch the *Peritonæum*, and make way through it. And though the External Wound in the Skin do not yield them Passage, yet they will so nest themselves between it and the *Peritonæum*, as to make a *Hernia*. To prevent which, you ought to hasten the Cure; and not only to keep the Patient in Bed, but to make good Compression upon the Wounds, that the Parts may unite while they are recent.

If in such a penetrating Wound the small Gut be wounded, the vehement Pain, continual Vomiting of Choler, and Dejection of Chyle by the Wound, will discover it: But in that Case, the keeping of it open to seek the Intestine will be a hard Task; and when you

you have found it, what will it signify, but to increase the Accidents ? Therefore it will be better to follow the Method of the Antients, to embrocate all the Region of the Belly with *ol. mastich.* & *lumbric.* to dress the Wound with Sarcoticks, and to keep it close and warm with Compres and Bandage. But if the great Intestines be wounded, and the Excrements discharge that way, it may be reasonable to lay open the Wound, and stitch the Gut with the Gloves Stitch, sprinkling it with some of the aforesaid Agglutinatives ; and reducing it back, stitch up the external Wound of the Belly, as hath been said. In all these Wounds, Venæsection is necessary, and may be repeated as Occasion shall offer. Regulation in Diet ought to be with great Moderation. Clysters may be administer'd after the second Day, of Chicken or Veal Broth, wherein Barley hath been boil'd : To which may be added Yolks of Eggs, *mel. comm.* or Sugar of Red Rose, &c. Also Internals may be prescrib'd, viz. Vulnerary Decoctions of *fol. plantag. equiseti, pimpinell. pilosell. rad. consolid.* to which may be added *cons. ros. rub. cons. cydonior.* Bolus's may be also proper of species *diatragacanth.* with Balsamicks. Wounds of the Liver, Spleen, and other *Viscera,* require to be treated much after the same manner by Intervals. They ought more especially to be kept open, either for the dressing them, or for the Discharge of Matter. Also Cataplasms may be applied *ex far. hord. fabar. flor. ros. rub. coct. cum hydromel.* For farther Satisfaction therein, I refer you to *Wounds made by Gun-shot.*

A Man was brought to *Lambeth* wounded transverse i. *Obser-*
the Belly a little below the Navel on the Left Side ; *vation of a*
the Omentum and Intestines were thrust out, and kept *Wound in*
close to the Wound with a Handkerchief in his Hand. *the Abdo-*
The Omentum was much out ; but not being alter'd by *men.*
the Air, I caused warm Cloaths presently to be held up-
on them very close, and the Patient to be plac'd low
with his Head, and his Hips rais'd up ; then by the Help
of his Friend raifing them yet higher, and shaking his
Body, I reduc'd them. After which, they having laid
him down with his Hips rais'd, and his Body somewhat
declining to the Right Side, my Assistant pressing with
his Hands something above the Wound, (by which the
Lips

Lips of it were a little turn'd upward, and the *Viscera* kept down,) I prepar'd to stitch the Wound with a strong Needle, somewhat curved at the Point, threaded proportionably, taking hold of the lower Lip, and pass'd my Needle first through the *Peritonæum*, and then to the opposite Side, through the Flesh and Skin, leaving the *Peritonæum*; and so along, taking it up on one Side, and leaving it on the other, till I had sowed up the Wound. Then I pull'd the Stitches as close together as I could, and fasten'd my Thread. The Wound thus stitch'd, I sprinkled the Stitches with *pulv. aloes, colophoniae, sang. draconis, mastich.* &c. and applied Sarcoticks with a Plaister over all, made up of some of the aforesaid Powders *cum. album. ovi*, and with Compress and a strong Towel braced them all fast. After a while I let him Blood, and order'd him to lie quiet upon the sound Side, and to keep his Body soluble by Clysters; also to be moderate in Eating and Drinking: I dress'd him after the same Manner every other Day; and when the Wound seem'd to be cicatriz'd, and that my Stitches began to fret, I cut them out the eighth or ninth Day; but continu'd the Use of Sarcoticks, till it was firmly cicatrized.

These Wounds are not subject to great Inflammation or Defluxion; but by Reason of the Fatness and Thickness of the Lips, and by pressing of the Kell and Guts, the Stitching of the Belly is a troublesome Work: And yet if the Wounds be not so stitch'd, that the *Peritonæum* and fleshy Parts may unite together, a *Hernia* will follow, as I told you; for the *Peritonæum* bears a great Stress.

Therefore you must be sure to take good Hold with your Stitches: And if you doubt their holding, make dry Stitches over them, with good Bandage.

2. Observation of a Wound in the Belly. A Man was wounded with a Rapier into the Belly, through the Right *Hypochondrium* out by the Back. I consider'd the Wound, and saw the Orifices were small, and little Advantage to be made by keeping them open: Yet I put in two small Tents, dipt in a little Digestive *ex terebinth. cum vitell. ovi*, and dress'd them up with *empl. è bolo* and Bandage, advising him to keep his Bed and be quiet. I also prescribed *3vj. syr. de meconio* mix'd in a Draught of *aq. Papaver.* to take that Night.

The

The next Morning I found him hot, and his Pulse a little disturbed, but without any Symptoms of the *Vis-Vis* *Signs of the cera* wounded; neither Tension of the Belly, Cholick, *inward* Vomiting, or ought extraordinary by Urine or Stool: Viscera However, I let him Blood about 10 Ounces, directing *hurt by a* *Wound of* him a Clyster of Milk, &c. to be administer'd that Afternoon, and at Night his Anodyne was repeated. The *the Abdo-* next Day I took off the Dressings, and considering there men, was no Symptom of hurt within, only the Wound a little heated by the Tents, I threw them out, and dress'd both the Orifices with Pledgits spread with the above-said Digestive, embrocating the Parts about with *ol. ros.* &c. applying a Plaister and Bandage as before, and desiring him to keep his Bed five or six Days longer. I dress'd him afterwards again; and finding the Aper-tures well dispos'd to cure, from that Time I dress'd him no more, but advis'd him to be temperate in Eating and Drinking; and if there were Occasion I would see him again. My Servant dress'd him afterwards, and before the seventh Day was expir'd he was cured, and walk'd Abroad, not complaining any more of that Wound.

Thus it frequently happeneth, that a Sword passeth through the Body without wounding any considerable Part. Yet if the Wound had been kept tented, it might have been subject to Inflammation, by reason of the Disturbance there, from whence ill Accidents might have happen'd. And what could the Chirurgeon have advantaged the Cure by keeping such little Wounds open, supposing Blood had been extravasated, which is the common Pretence? Yet if it be not done, he is usually condemn'd by the common Vogue. Therefore it is that some of our Profession, possibly against their own Judgments, keep them tented often, to the Ruin of their Patient.



C H A P. IX.

Of Wounds of the Head.

I Shall now discourse of Wounds of the Head, not only as they are made by Cut, Stab, or Bruise, but also of those made by Gun-shot; and so by anticipating Part of the Discourse next ensuing, give you the full Doctrine of them, by what Instrument soever made, without a Necessity of future Repetitions. And that you may understand the *Basis* whereon these Cures are wrought, I shall represent the Head to you as it is framed.

Parts of the Head consider'd.

The Head, according to *Galen De usu part.* is the noblest Member of our Body, the principal Faculties being there seated, for the use of which it was ordain'd; and is so contriv'd, as to be the Foundation of Animal Spirits, and also to contain the principal Organs, both of the internal and external Senes.

The Hairy Scalp.

In the first Place the Hairy Scalp presents itself to our Eyes; and therein is to be consider'd its Thickness, Sense, and Vessels, with the Muscles that lie under it. The Hairy Scalp is thinnest on the Top of the Head; nor is there any Muscle between it and the Scull in that Part, unless you will call the *Membrana carnosa* a Muscle; which some Men of late do, and possibly not improperly; and the rather, because by it many Men move the whole Scalp. If you doubt of a Fracture there, you may boldly cut into the Hairy Scalp: It is of an obtuse Sense, and easily heal'd up again. But be

Forehead.

cautious how you make your Incision in the Forehead, where a transverse Wound may cause the Eye-brows to fall over the Eyes. Therefore, if you are forc'd to make Incision, let it be according to the Length of the Fibres. And be careful that you make no Incision upon the Temporal Muscles, for thereby Convulsion and other ill Accidents may happen.

Temporal Muscles.

Under

Under the Hairy Scalp lies the *Pericranium*, which Pericra-
we are to cut through in making way to the *Cranium*. You are to raise them both together, when you lay bare the *Cranium* for the Use of the *Terebra*. For (say Authors) if in perforating the *Cranium* you tear this Membrane, Inflammation and Fever may follow; the *Pericranium* arising from the *Dura Mater* through the Sutures, by which Continuity that may also partake of the Inflammation.

The *Cranium* follows, which is a Bone compos'd of *Cranium* many jointed together by Sutures, of which there are *and Sut-* five concern us; *Coronalis*, *Lambdoides*, *Sagittalis*, and *tures*. two false ones. In perforating the *Craninum*, you are to shun these, ((if you may,) for through them the *Dura Mater* passes, as I told you, and is continued unto the *Pericranium*. The Sutures divide the Bones of the *Cra-*nium, by which one Part of it may be preserv'd entire, while the other is broken, which otherwise would be in hazard. These Sutures are weak in resisting Blows, and between them Matter may be unhappily retain'd, and cause a *Caries*, and sooner work through to the *Dura Mater* than in other Parts of the Scull. It is necessary to know them well, lest, as *Hippocrates* gives good Cau-tion, you take them for Fissures. The way of finding them is, by passing one String from Ear to Ear, and another from the Nose to the Crown of the Head. The former of these will shew you the Coronal Suture, the second the Sagittal, which usually begins at that Point where these Lines intersect, being the Part where we make Fontanelles, and reacheth to the Crown of the Head, and joineth with the *Lambdsides*. Sometimes it beginneth quite at the Nose. The *Lambdoides* ariseth at the End of the Sagittal, and goeth forked down the two Sides of the *Occiput*. Of the *Suturæ nothæ*, the two chiefly to be regarded are the *squamosæ*, which run under the Temporal Muscle of each Side, round about the outer-most Verge of the Ear. You are also to take Notice, that the *Cranium* is thinnest in the middle Part of the Head, and thickest in the hinder Part, and of a middle Thickness in the Forehead. Hence it is that Wounds are most dangerous in the Crown of the Head, where the Scull, by Reason of its Tenuity, easily communicates its Hurt to the Brain; and also for that the

upper Part of the Brain lies there high, one of the largest Sinus's being immediately under the Scull, and many capillary Veins running so close with it, as to make themselves Trenches in the internal Part of the *Cranium*. Wherefore upon a Blow or Contusion in this Place the Veins may easily be broken, and the Blood extravasated between the *Cranium* and *dura Mater*, and ill Accidents follow.

Dura Mater.

The *dura Mater*, a strong Membrane, is placed under the *Cranium*; the wounding of which is attended frequently by Palsies, and in Progress of the Distemper by Convulsions, with other ill Symptoms; and the greater, if the Wound be in the Middle Part of the Head according to its Length, there being many Vessels there, which, if they chance to be cut, will fill the vacant Space between the *Cranium* and *dura Mater* with Blood.

Pia Mater. The *pia Mater* lies upon the Body of the Brain, so close, that a Wound cannot be made into the *pia Mater*, and the Brain escape: And from its many Veins a Flux of Blood must follow.

Brain.

The Brain lies under the *Pia Mater*, in whose Ventricles is lodged the *Plexus Choroides*, and under whose Basis lie large numerous Branches of Arteries and Veins, which by great Blows of the Head may be broken.

Description and Difference of Wounds in the Head. Concussions, Contusions, and Fractures.

From the Description of the Head we shall proceed to the Description of its Wounds, which are strictly so call'd, where any Part of the Skin, Flesh, Bones, Membranes or Brain is cut or torn.

But where the Skin remaineth whole, Concussions and Contusions do often happen, and will deserve to be treated of in this Place with the Wounds: Not only because they are the frequent Companions of Wounds; but also because, when alone, they produce grievous Accidents, resembling those of Fractures, nay often exceeding them. I shall therefore gradually describe Concussions, Contusions and Fractures, under the following Heads.

1. There may happen Concussions of the Brain from a Blow, Fall, &c. nay sometimes from a Box on the Ear, wherein the Symptoms may arise to a great Height, without

without breaking either the Skin without, or Scull within. Which Concussions if they be of the lesser Sort, wherein no Vessel is broken, or Blood extravasated, so that the Person is only stunned, he soon recovers. But if of the greater Sort, with Rupture of the Vessels, and Extravasation of Blood, they produce *Stupores*, *Vertigines*, *Deliria*, and many the like Symptoms, and are every whit as dangerous, nay often more dangerous than Fractures themselves.

2. Contusions, when great, do usually produce a Fissure or Crack of the Scull, either in the same Part where the Blow was inflicted, and then it is called *Fissura*; or in the contrary Part, in which Case it obtaineth the Name of *Contrafissura*. These Fissures are through both Tables of the Scull, or one only. If one only, then either outward or inward, the other *Lamina* remaining whole. They are long, short; wide, narrow; straight, crooked, &c.

Contusions are considerable whether they be with a Wound or not. Those without a Wound are for the most Part accompanied with great Concussions, and sometimes Fissure and Fracture, or Depression of one or both Tables: In which Case the spongy medullary Interval that interceeds between the two Tables is frequently broken into its minute Fibres, and squeezed together. Hereupon Extravasation of Blood followeth, and other Accidents that will be taken Notice of in the Prognosticks, and in the Observations.

4. Next to these are Contusions with Wounds, which are generally attended with Fracture, properly so call'd, where a Piece is wholly divided from the rest of the Scull. This Fracture sometimes consisteth of many Pieces, some whereof are depress'd upon the Membranes, yea, into the Brain itself, while others lie entangled in the Flesh.

5. Next to these are Wounds made by any sharp Weapon, which, according to the Force, cutteth into the Bone many Ways, which Cuts are call'd *Sedes*, and are reckon'd amongst the Fractures; and so those made by Pole-Axe, Halberd, and such obtuse heavy Weapons, may justly be term'd. But those made by a Sword have seem'd to me Wounds, and not Fractures; and when they do not penetrate the first Table, require no

other Cure than that of Wounds; as may be seen in some of the Observations. But when the Penetration is deep, I do treat it as a Fracture, and so I place it here.

6. Out of these proceed several Species of compound Fractures; as the *Ecpiesma*, *Camarosis*, *Eccope*, &c. which every Man's Experience will suggest to him.

Signs.

Celsus, in his eighth Book and fourth Chapter, advises, when you are call'd to a Patient in such Cases as above-mention'd, to enquire whether he was stunned or fell down with the Blow, or vomited presently after. You are also to enquire how he was hurt, whether by Blow or Fall. For from the Force of the Weapon, and Manner of the Fall, you may shrewdly guess at the Case. You are also to consider the Tumour, whether it be great or small. If there be a Wound, nothing is more sure than your Finger to discover the Fracture. If you feel any Asperity, if it be not a Suture, you may be sure it is a Fissure or Fracture. But supposing there be neither Wound nor Tumour, yet if the Patient suffer under a Palsy in any Part, or lie stupefied or raving, it is most certain the Membranes of the Brain are oppres'd. And if the Hair lie cut in the Wound, you may suppose the *Cranium* hurt, it being no small Force can divide Hair in that Place. The holding a Thread between the Teeth, or biting a Crust, is mention'd by Authors, as a Way to find out a Fracture: But I think it of no great Moment, unless the Fracture be near or under the Temporal Muscle.

Prognosticks.

Wounds of the Head, according to *Hippocrates*, are not without Danger, how slight soever they may appear to common Judgment. Incised Wounds of the Hairy Scalp reaching to the *Cranium*, cut by a Rapier, are the least dangerous or difficult of Cure. Those made by a Halberd, Bill, and such like heavy Weapons, are not without Danger; so also those made by Puncture with a Dagger. By how much the nearer they penetrate to the Brain, so much the more dangerous they are. All Contusions of the Head are to be suspected, for from those the greatest Symptoms do arise. If in laying open the *Cranium* the Patient recover not his Senses, you may suspect an Extravasation of Blood under the *dura Mater*; in which Case his Life is in great

great Hazard... Those Fractures made by Gun-shot do for the most part beat Pieces of the Scull into the Brain, and so may be determin'd mortal. But be the Hurt what it will, if it penetrate not farther than the *dura Mater*, it is curable, if it be timely laid open, and dress'd, as shall be shew'd in their proper Places.

We begin with the *Cure* of simple Contusions of the *Cure*. Hairy Scalp, happening by Blow or Fall, attended with Pain, Inflammation, and Tumour. In order to the preventing or removing of which, you ought in the first Place to shave off the Hair, if there be any, and embrocate the Tumour and Parts about *cum ol. ros. myrtill. & aceto*, and apply this, or such like Cataplasm, on the affected Parts: Rx far. hord. fabar. an. 3vj. pulv. nuc. cypress. balaust. aluminis roch. 3j. ros. rubr. 3vj. ol. ros. 3ij. album. ovor. num. ij. aceti q. s. fiat *Cataplasma*. After you have thus dress'd the Patient, let him blood in the Arm or Neck of the same Side, and some Hours after let a Clyster be administer'd, and lay him to rest at Night with a Draught of an Emulsion of the cold Seeds, &c. The next Day repeat the former Method of Dressing; and after you have thereby restrain'd the Afflux of Humours, you may foment the remaining Tumour with Red Wine, wherein have been boil'd *fol. betonic. flor. anthos, stachad. cham. ros. rub. bacc. myrtill. &c.* and embrocate with *ol. ros. & cham.* But if it grow hard and painful, and threaten Apostemation, foment it with *decoct. summitat. malvae, rad. althææ, sem. lini & fænugræci*, and make a Cataplasm of the *Fæces*, adding *far. hord. &c.* And if it suppurate, treat it as a *Phlegmon*. But if the Pain do mitigate, and the Tumour be continu'd with extravasated Blood, as in an *Eccymosis*, you ought then to discuss and dry up the Serosity by such like: Rx far. hord. fabar. an. 3ij. flor. ros. rub. bacc. myrtill. an. 3j. summit. absinth. fol. beton. flor. sambuci, cham. an. 3ij. sem. cymin. 3j. pulver. & coq. in vin. rub. addend. mell. com. 3ij. ol. ros. & cham. an. q. s. fiat *Cataplasma*. If by these the Humour doth not dry up, nor the Tumour discuss, open it, and digest, and cure it as in its proper Observation will be shew'd. If there be a Concussion with the Tumour, you ought to begin with letting Blood, and repeat it as you see Occasion, even to failing of the Spirits; and

keep the Body soluble by Clysters; also contemperate the Ferment in the Blood, by frequent Draughts of Emulsions, &c. The external Applications are much the same as have been abovesaid, by shaving off the Hair, and embrocating the Head and Neck *cum ol. ros. myrtill. album. ovor. & aceto*, and applying Cataplasms, as abovesaid, decocted in Red Wine or Oxycrate. After some Days, when the Symptoms are remitted, apply *empl. Vigonis ad contusiones*, or this following, which is also his; Rx furfur. tritic. ʒij. far. lentium ʒij. flor. ros. rub. bacc. myrtill. balaust. an ʒj. calam. aromatic. ʒis. flor. cham. melilot. an. ʒls. nuc. cupress. num. vj. pulver. annia, & coquant. in vim. austri. q. s. ad consist. Cataplasm. addendo ol. ros. cham. an. ʒij. Or with Wax, &c. you may make it in the Form of a Cerote. Fomentations may likewise be made of the foresaid Ingredients. But in Case the Concussion do not cease by the prescribed Remedies, then lay open the suspected Part, and proceed as hereafter shall be shewed.

In great Contusions without a Wound, if the Tumour be large, feel pappy and increase, notwithstanding your Application of Refrigerants; you may suspect the Quantity of Serum, raising the Tumour, to proceed from within, through some Fissure in *Cranio*. In which Case (having consider'd the Symptoms) make Incision into the Tumour proportionably. And if you feel no Part of the *Cranium* bare or depress'd, dress it up with Digestives, and make your Applications over it of such Medicaments, as have been prescribed in the former Contusions. And if thereupon the Tumour do flat, and the Wound digest, proceed in the Cure accordingly. But if there be Depression, or other ill Symptoms of internal Parts hurt, lay the Hairy Scalp more open, and make Way for farther Inspection.

*Simple
incised
Wounds.*

In the Cure of Wounds of the Head, if they be made by a Rapier dividing the Scalp to the *Cranium*, nay, though it cut the Scull, if there be no Symptom of an internal Hurt, the Lips of the Wound ought to be brought close together, and healed by Agglutination. The Stitching of these Wounds is objected against by some, lest Matter should be thereby pent in, and foul the Bone. But if you can satisfy yourself that the Wound ought speedily to be healed, the Work is safe,

if done judiciously. Abroad in *Spain* I have seen them as commonly stitch'd, as other incised Wounds; and in the Wars we stitch'd them successfully; and here in Town I have stitch'd up great Wounds of the Hairy Scalp. However, you ought not to crowd these Wounds with Dossils; for thereby you may raise a Fever, and prolong the Cure. Therefore, having clipt away the Hair, dress the Wound *cum pulv. Galen. & empt. è bolo*, or some Defensative, with Compress and Bandage, bringing the Lips close together; and afterwards let the Patient Blood, if he did not bleed sufficiently at the Wound: and the Day following administer a Clyster, if the Body require it. At the next dressing, embrocate the Parts about *cum ol. ros. &c.* and dress the Wound with *liniment. Arcei* upon Pledgits, and it will soon cure. But if the Lips of the Wound were not retain'd close together at the first Dressings, it may be necessary to dress it with Digestives *ex terebinth. &c.* embrocatting the Parts about, and apply Plasters accordingly. Thus, in a few Days, all these incised Wounds may be cured.

One *Smith*, sometime a Tanner in *Chester*, was afterwards a Captain of a Company of Dragoons, which he pick'd up in Haste, to distract us in our Retreat from the Battle of *Worcester*. He was wounded by some of our Soldiers transverse the Right Temporal Muscle, and was bleeding almost to Death, when I was brought to his Quarters. I stitch'd his Wound, taking the Artery up with the Lips, and, for want of other Remedies, dress'd it with a little Wheat-Flower, and the White of an Egg, applying over it a Compress press'd out of Vinegar, with convenient Bandage. The third Day after, I took off the Dressings, and found the Lips near agglutinated. I being then better provided by an Apothecary from *Warrington*, sprinkled the Lips of the Wound with *pulv. thuris & sang. dracon.* and applied a Pledgit spread with *liniment. Arcei*, and over it *empl. diachalcit.* The second Day after, I cut the Stitches, and applied Epuloticks; and afterward by a Dressing or two more, cured him. I am sure he was well of his Wound before he had recruited his Spirits he lost with his Blood.

*Wounds of
the Head,
with Loss
of Sub-
stance.*

*Unguent.
Matris-
sylvaæ.*

In Wounds of the Head, which you cannot cure by the first Intention; as where they are inflicted by a Weapon with an obtuse Edge, or where there is Loss of Substance, as Part of the Lips torn off, there you must digest; and to that Purpose the common Digestive *ex terebinth.* *cum vitell.* *ovi,* & *farin.* *bord:* is proper. It may afterwards serve for a Deterotive, if you add *mel.* *com.* *aut rosat.* *pulv.* *ireos,* *sarcocol.* &c. With a farther Addition of Myrrh and Aloes, it is a good Sarcotick. Or you may incarn with *liniment.* *Arcei,* which was by him design'd for Wounds of the Head. *Vigo* commends this: Rx *ol.* *rosac.* ʒvj. *ol.* *mastic.* ʒij. *pinguend.* *vitulin.* *porcin.* *an.* ʒiv. *fab.* *plantag.* *matris sylvaæ.* *beton.* *pimpinellæ,* *pilosellæ,* *flor.* *anthos,* *an.* *Miss.* *vini odoriferi* *cochl.* iiiij. *coquantur ad consumpt.* *vini;* *colat.* *adde mastic.* *gumm.* *elemi,* *resinæ,* *pin.* *an.* ʒj. *lithargyr.* *auri & argenti* *an.* ʒij. *minii* ʒx. *terebinth.* *Venet.* ʒiv. *ceræ q. s.* If in the incarning the Wound the Flesh grow luxurious, touch it with a Vitriol Stone, and it will deterge, and dispose it to cicatrize; which you may then compleat with Pledgits of Lint press'd out of *spir.* *vini,* *aq.* *calcis,* &c.

In Wounds made by Contusion, where the *Cranium* is a little naked, you ought not presently to crowd in Dossils; for if that contused Flesh be well digested, the Bone will incarn underneath with the Wound without much Difficulty. In those of the worst Habit of Body I have happily incarn'd, by keeping the Orifice a little open by a small Dossil pressed out of *spir.* *vini,* and defending the Parts about from Fluxion by Medicaments and Bandage, as hath been shewed in such Cases. Take Care that the Matter be not shut in by your Dressings; for thereby the Wound may be made more hollow, and the Cure prolong'd. To prevent which, I have been sometimes necessitated to apply a Compress round, leaving a Hole in the Middle of it, for the Discharge of Matter, whilst the Parts about incarn'd by Compression.

But if the Wound be with so great Contusion, that it casts off a Slough, and leaves the *Cranium* much naked; though it be not foul'd either by the Matter or Air, yet it will then be necessary to rasp it: for the Bone is naturally smooth and slippery, as if it were polish'd, and

and Flesh difficultly groweth upon it. Wherefore, to hasten the Cure, you ought, by the Authority of Galen, and the most practical Men, to rasp the Bone thin, till you see the Blood ready to come out of it; the Bone will thereby be the sooner supplied with Materials for Generation of Flesh. But if your Patient will not admit of Raspatories, then you ought to keep your Dof-sils close to the Lips of the Wound, and make your Exfoliation from the Edges, that the sound Part may thrust off the rotten Bone. For neither Crabs Eyes, nor any Medicine inwardly prescrib'd, or Wine outwardly applied with Lint, or other Medicaments to the Middle of a Bone, will signify any thing to the Exfoliation of it: Nay, the while you are so trifling, the Matter from the Edges will rot the Bone underneath, and in Continuance pierce through the first Table, and run down between the two Tables, thereby doing much Mischief, and so will put you upon the Use of the *Terebra*. After the Bone is scrap'd, you may dress them with Pledgits dipt in *liniment. Arcei* hot. If it require Digestion otherwise, apply them press'd out of *spir. vini*, either simply, or such wherein hath been infus'd *pulv. radic. ireos, aristoloch. peucedan, &c.*

If in a Wound of the Head made by a Sword, the Scull be cut slanting off, or into the second Table, if there be no Symptoms of Concussion, you ought not to lay open the Wound to set on a *Terebra*, but cleanse and dress it up with a proportionable Dofsil press'd out of *spir. vini*, and digest the Lips of the Wound as above-said, and attend the Exfoliation; then heal it. Some Authors have advised the Raspings of these Bones; but in this Case it is needless: for if the Bone be dress'd as I have said, the Flesh will soon arise in that Cut of the Bone, and make Exfoliation of what is necessary, and incarn it, without your farther Trouble.

If the *Cranium* be hurt by a sharp cutting Weapon, *Fissure in Cranio.* it cannot be without Solution of Continuity in the hairy Scalp; but by a Fall or Blow the Scull may be fissur'd or fractur'd, and the hairy Scalp whole, and this Fracture or Fissure may be under the Contusion, or in some other Parts. If the Symptoms do demonstrate that there is a Fracture or Fissure, you are then, without Delay, to open the hairy Scalp, according as the Part

*Against
round Inci-
sion upon
Surmise.*

Part will admit, angularly, or in the Manner of a Crois, or of the Letter T, that the Fracture may be discover'd by the rais'g of it up with its *Pericranium*. For if you shall in doubtful Fissures or Fractures make a round Incision, and take out the whole Piece; then, if there chance to be no Fissure, you have made your self a long Work to little Purpose: And if the Fissure run under the hairy Scalp farther than you made your Incision, you may then be necessitated to cut it open that length; by which it will appear, you have through Mistake laid it open more than was necessary in one Place, and too little in another, doing that which neither *Hippocrates*, nor any judicious Chirurgeon, wou'd ever allow. Whereas if you have laid it open by a cross Incision, you might by only rais'g the Scalp have discover'd the Fissure or Fracture; and if yet Part of the Fissure or Fracture had lain undiscover'd, you might have stretch'd your Incision to it: And in case, after all, there had been no Fracture or Fissure, which often happens, especially in Contrafissures, then you might have laid the hairy Scalp down again, and easily cured it; which by an Excision of Part of the Scalp you can-not do.

Objection.

As to what may be objected, That the rais'd-up Lip might be troublesome to the Chirurgeon in his Work, and painful to the Patient; there is no such Thing: For if the Incision be made the Way propos'd by the Ancients, and that the Fracture or Fissure be all in your View, you may order the Lips of the Wound as you please.

The *Cranium* laid bare, you are to fill up the Place open'd with Dossils of dry Lint, or press'd out of Red Wine or Oxycrate, or a Sponge press'd out of either of the same Liquors; and apply a Plaister over all of *diackalcit.* malaxed with *ol. ros. cum aceto*, and bind it up.

*Trial of
Fissures.*

At the next Dressing, you must consider the Fissure. If it be so small, that you doubt whether it be one or not, then wet it with Ink, and wipe it off again, and the Ink will discover where the Fissure is. But if it do not, then this Emplaster may be applied: Rx *cerae novæ* flavae, *thuris*, *ladani*, *an. 3ij. farin. fabar. terebinth. aceti*, *an. 3j.* Misce ad ignem. You ought to apply it on the suspected

suspected Part ; and the next Day, where you shall find it moist, there you are to rugine it.

Fallopis tells us, that where the *Cranium* is contused, certain Spots will appear Red, not unlike those White ones which are usual in the Nails of the Fingers ; but after the third Day the Blood exhales, and that Redness ceaseth. If by the Emplaster you discover the Fissure, or that the Bone contuses, you are to rasp the contused Part the whole length : To which Purpose, you ought to be furnish'd with various Sorts of Raspatories. Whilst you are working with them, the Lips of the Wound ought to be cover'd with some soft Linnen, that you neither hurt them, nor yet the Air offend them. Sometimes very small Fissures, how inconsiderable soever they may seem, are the Cause of the Patient's Death ; there being often found extravasated Blood upon the *Dura Mater*, and the Veins broken, either by the Concussion from the Blow, or by the rough Edges of the inner Table. Therefore you are to consider the Symptoms, and accordingly lay open the Wound either by Raspatories, or otherwise cutting into it, so as the *Sanies* may be discharg'd, and the Asperity taken away. But *Fracture* if there be a Fracture of the *Cranium*, you ought to sa- in Crano, tify yourself, whether it be in one or both Tables : If with De- in both, then whether the Depression of the Bone be pression great, and what Fissure there is ; and accordingly make way to relieve the *Dura Mater* underneath ; for it can- not be without great Disturbance, viz. Inflammation, Fever, and *Delirium* ; from whence *Coma*, Convulsions, Palsies, and Death ensue, if neglected. But if there be a Fissure so large as to discharge the Serosity, you may take more Deliberation in laying it open, or rasping the Bone. If it be otherwise, then the Trepan ought to be applied, to give Vent to the *Serum*, and to make way for the raising the depress'd Bone. But if the Bone be not much depress'd, and the Fissure considerably large, it is then at your Choice, whether you will en- large that Fissure, or continue it for Evacuation of the Matter, and forbear the Use of the Trepan, not doubt- ing but a small Depression of the Bone will either rise, or cast off, by the Benefit of Nature. I know it will be hard to dissuade some Chirurgeons from applying a Trepan in this Case : for I myself have been glad to com- plly

ply with some of them, in setting on a Trepan where the Fissure was sufficiently large, and when all the ill Symptoms were remitted, and where there was no Depression of the *Cranium*. But what did it signify? Indeed where the Fissure lieth untowardly for Discharge of Matter, or where the Depression of the *Cranium* is deep, there a Trepan ought to be timely applied.

*Perforati-
on.*

In order to the Perforation of the *Cranium*, the Bone must be clear'd of its *Pericranium*, lest in setting on the *Terebra* or *Modiolus*, (which are two several Names for a Trepan,) you tear the Membrane. The Lips of the Wound ought also to be cover'd the while. The *Terebra* ought to be set on that Side which is most depending. And in Case of a Depression, make your Perforation so near, that you may afterwards be able to raise up that by it. When you have set on your Trepan, press upon it with your Left Hand, and turn it round with your Right. You must use a little *ol. ros.* or Milk to cause it to move the easier, and as it fouls, brush it; in doing of which, it will cool. Before you approach to the second Table, (which you may know by the Blood that appears) it will be requir'd that you take out the Pin, and proceed more warily, not listening to the Pratling of the Standers-by, but often lifting up your Hand, lest by your Compression or Haste you unawares fall upon the *Dura Mater*, and wound it. Some Chirurgeons do bring out the Bone in the Bore; but it will be safer to raise it up with your Levator, when it is so cut, that it is but lightly retain'd in some Part. During this Work, it is fit the Patient's Ear were stopped with Lint, lest the Noise disturb him. The Room ought also to be close. The Perforation made *in Cranio*, and the Bone taken out, you are to smooth away the Asperity which remains in the lower Table, by the Lenticular Instrument made for that Purpose.

*First Dres-
sing after
Perforati-
on.*

If after this the Membrane be foul'd by the Saw-dust of the Bone, you must wipe it off with a soft Sponge, or a little Lint upon your Probe. The Part being cleans'd, you are to dress up the Membrane. About this first Application, Authors differ much. *Ariacen* dress'd them with Linients, viz. *ol. ros.* *Celsus* dress'd the Part with *siccantia*, viz. *cum aceto acerrimo*. You may find him positively for it in these Words; *His factis,*

factis, (the Perforation being made) ea membrana acri aceto respergenda est, ut si intus concretus crux remanet, discutiatur, &c. He sprinkled the Membrane with sharp Vinegar, to prevent the Bleeding, and dissolve the concreted Blood lying upon the said Membrane, or *Dura Mater*. But the most Part of the Ancients, and many of the Moderns, have advised Lenients, as *ol. ros.* that the Blood extravasated, and lying upon the *Dura Mater*, in *pus convertatur*, may be digested. But in this you are to be guided by your Eye. If there be *Sanies* or Putrefaction, *mel. ros. spir. vini*; and higher Detergents may be used, accordingly as the Putrefaction is more or less. If there be much Blood extravasated, or that you fear bleeding, that of *Celsus* may be proper: But if the Blood be recent, and exceed not in Quantity, it possibly happen'd from some Scratch of your Trepan, or some little Asperity of the inner Table. If there be neither of these, but the Membrane fresh, and of its natural Colour, then you are not to grieve that Membrane, now expos'd to the Air, with Detergents, nor by the Acrimony of Vinegar: For if you shall by scratching of the Membrane make it bloody, and then dress it with either *acetum*, or *mel. ros. spir. vini*, &c. you shall then proceed contrary to the common Indication's in Chirurgery, which teacheth to digest recent Wounds before you deterge. And indeed what would you deterge?

Therefore I do advise the Use of Lenients, not only by the Authority of those Ancient and Modern Chirurgeons, but by my own Practice. *Galen* proposed *sang. columb.* and the Blood of Turtles dropt warm from their Wings. *Falop.* and *Fabric.* *ab aquapend.* proposed *ol. ros.* with *resin. abietis*: And afterwards they increas'd the Resin, and lessen'd the Oil. But if there be Putrefaction through the long lying of concreted Blood, &c. then *mel. ros.* and *spir. vini* are proper; yea, *mel. Ægyptiac.* and higher, if Occasion shall offer. But in the common Cases, after recent Terebrations, Resin by its Emplastick Quality mix'd with *ol. ros.* perfects the Concoction sooner, and by its anodyne Quality secures the Part from Inflammation. It ought to be proportion'd to the Habit of the Body: Dry Bodies require more of the Resin, and less Oil. And by this simple Medi-

Medicament, I never fail'd of good Digestion ; and afterwards by the tempering of it as I have said, I have deterg'd and digest'd, always continuing the Use of it until the Membrane was well digested, never finding the least Prejudice the bare Bone received from it. But you must take care that you do not use Digestives unseasonably, for thereby you may relax Parts. Therefore after Digestion add more Resin, and less Oil. Or you may mix *mel. ros.* with the Resin, instead of the Oil; which will answer your Intention, both to deterge and incarn. Or you may use this to both Purposes; its Composition will commend its self: Rx *terebinth. Venet. ʒj. ol. ros. ʒiv. mel. ros. ʒijj. croci ʒj.. granor. kermes ʒfs. sem. hyperici ʒij. vini Hispanic. ʒijj. coq. ad consumpt. vini; colat. adde aloes ʒi. Misc.* These Medicaments may be applied upon the *Dura Mater*, and a Button of Lint over, to fill up the Hollow in the Bone: The rest of the Bone may be dress'd with dry Lint, or *liniment. Arcei*; and the Lips of the Wound with a Digestive, as aforesaid, *cum terebinth.* over which apply *empl. dia-palmæ* malaxed with *ol. ros.*

In the Use of Medicaments, you are to consider the Part and Habit of Body, and add or diminish your Simples, accordingly as you design to deterge or incarn, &c. and so they will perform all Intentions. Some Authors have limited us a Time to dres with this or that Medicament; viz. to use Digestives to the fourth Day, from that Time to deterge to the seventh, and to incarn to the fourteenth Day. But herein you must make use of your own Judgment, persisting to cherish the Native Heat. If the Wound penetrates to the *Dura Mater*, you must consider the Force of the Weapon, and make haste to relieve the Parts under the *Cranium*. Yet a Day or two before the Battle of Worcester, a Gentleman attending the Earl of Derby in his Retreat thither, receiv'd a large Wound between the Sagittal and Coronal Sutures by a Sword, it cutting through the *Cranium* to the *Dura Mater*. The Menibrane was cover'd with the small Shivers of Bones. He had only a thin Linen Cap over it, his Haste not permitting him to be dress'd. And it may be it was the better for him: For if Dossils had been hastily crowded upon the Bones, severe Symptoms would have follow'd; whereas the

Observation.

Shivers

Shivers lying lightly upon the Membrane, he was free ; and being ignorant of his Danger, rid a great Journey. I after took them out, and dress'd the Membrane with Digestives, the short Time we were together. But when Fractures are made with Bullets or Slugs, there the hairy *Gun-shot.* Scalp and Pieces of the *Cranium* are driven in together upon the *Dura Mater*. In which Cases you must presently lay open the hairy Scalp, and raise it up with the Bones, and relieve the oppress'd Membrane. If the Flux of Blood be great, cleanse it with a Sponge dipt in Red Wine or Vinegar, and dress it as hath been shewed. If the Opening in the fractur'd *Cranium* be not sufficient, make one in the most declining Part, and raise up the Bones, and free the Membrane of whatever may offend it. But do not take out more Bones than needs must : Like some of those Chirurgeons I have met, carrying them about in their Pockets, boasting in that which was their Shame. For if you look well upon such, you may see many of them were corrupted by the Matter, through the Ignorance of the Chirurgeon. For recent Fractures of the *Cranium* do frequently unite like those in other Parts, if the Matter hath Liberty to discharge from within. Therefore, having rais'd up the Bones that are loose, dress the others dry with Catagmatics, &c. and take Care that they be not overgrown with loose Flesh, and they will happily agglutinate.

It sometimes happeneth in great Concussions, that we lay open the hairy Scalp ; and though we discover neither Fissure nor Fracture, yet we perforate the *Cranium* to relieve the Patient : But if notwithstanding, the Symptoms of *Coma* or *Paralysis* do not remit, you may shrewdly suspect the Extravasation of Blood lieth deeper. For it sometimes happeneth in Concussions, that the extravasated Blood lieth between the *Dura* and *Pia Mater*, and otherwhile amongst the Ventricles of the Brain. In which Cases, if the Perforation of the *Cranium* relieve them not, you must make Apertions through the *Dura Mater* ; and if the Blood lie between it and the *Pia Mater*, it may haply be discharg'd. How that is to be dress'd, I shall shew you presently : But for the most part, the long Retention of Matter sphacelates the Brain ; and as the Patient suffer'd from the Beginning

under the severe Symptoms of *Coma* or *Paralysis*, so he dies at last Convulsive.

In these Wounds of the *Dura Mater*, the Lenients of *ol. ros.* or warm Pigeons Blood, are proper: they are anodyne, and digest. *Ol. hyperic.* and Mastich are also good mixt with Resin. *Fabr. ab Aquapendent.* cites *Galen*, and he *Archigenes*, as dressing these Wounds with *succ. calaminth.* and afterwards sprinkling *pulv. milii* on the Membrane to incarn it; the *Milium* moderating the Heat of the other. He delivers them to us, as *siccantia*, *detergentia*, and *incarnantia*. The Union and Incarning of the Lips of the *Dura Mater*, is perform'd by a fleshy Substance that ariseth upon the Membrane, which afterwards, as it increaseth, doth unite them; and overspreading that Part, groweth up to the *Cranium*, and unites with that *Callus*, (after Exfoliation of the Bone,) and becomes one Body with it, filling up the Place that was perforated, and in Time groweth more firm than the Bone itself. But the while you must be careful that your Lenients make not the Flesh too lax by their Greasiness; for so a *Fungus* will thrust out thence, which may be vexatious to you. This in the Beginning may be prevented by Desiccants, and wasted by *Mercur. precip. pulv. cort. granat. balaust. ros. rub.* or *alumen ust.* alone. But if it grow very big, it must be taken off with a Ligature. Yet, to tell you truly, I never met with any such like Disturbance as is represented to us by Authors; nor shall you, if you use your Desiccants timely: For the Vitriol-Stone takes this off with little Pain, and disposes the Part to cicatrize, if it be used with Moderation, and timely.

The *Pia Mater* is, (as I have elsewhere said) a most delicate fine Membrane, and adheres so close to the Brain, that it can scarce be hurt without a Wound in the Brain itself: Which Wound is for the most part mortal, partly for that the Membrane is full of Veins, and subject to great Effusion of Blood; partly also, because the Brain being expos'd to the Air, is thereby over-cooled, and corrupting growth fluid, and is thrust forth by the Contraction of the *Meninges*, (or Membranes) which are irritated by the constant Pain they suffer from the Putrefaction of the Brain; and so it happeneth, that it worketh out at the Wound. So long

as any remaineth in that Ventricle, you must make way to these Wounds by removing the shatter'd Flesh and Bones: But if they will not come easily away, leave it to Nature, lest the Patient die under your Hands, and you be thought to hasten his Death. Your Dressings must be with Galen's Powder and Hares-Fur, *cum albumine ovi*, upon Pledgits, to restrain the bleeding, and retain the Brain within its Bounds. Apply over them your Dressings, as in the Wounds of the *Dura Mater*; remembering, in all these Gun-shot Wounds, to cut off Note. the shatter'd Lips of the hairy Scalp, lest a Gleat drop from them upon the *Meninges* and Brain, and heighten the Accidents. If the Brain be retain'd within its Membranes, the *Pia* and *Dura Mater*, and they digest and incarn, then you may proceed in the rest of the Cure as in Fractures of the *Cranium*, as hath already been said.

In all Hurts of the Head, what Sort soever they be of, the Body is to be emptied; and the rather, if there be *Plethora* or *Cacochymia*: for in such Habits of Body, Humours are more apt to stir up ill Symptoms. Therefore you ought timely to let them blood in the Neck or Arm on the same Side; and repeat bleeding according to the Exigency, and the Strength of the Patient's Body. Also Cupping (with or without Scarification) of the Neck and Shoulders, with Fontanelles under the Ears, is necessary. Then lenient Purgatives, such as may evacuate the serous Blood, which by reason of its Tenuity and Heat readily flies to the affected Part. These Purgatives must be such as have been propos'd in the fourth Intention of Wounds in general, to which I refer you. Cordial Spices and Electuaries may be proper, if they be proportion'd to the Temperature of the Body, hotter or colder, as there are Fever or other Accidents join'd with the Malady; in which Cases, Juleps and Emulsions are necessary. Vulnerary Drinks are sometimes in Use here, if they be fitted according to the Nature of the Part. The Ingredients for these are *beton. artemis. caryophyll. primula veris, lilium convallium, salvia, hyperic. saniculla, veronic. plantag. flor. ros. rub. nuc. moschat.* &c. as in the Chapter foremention'd. Of these you may make Drinks with Wine and Water, or small Ale: Rx *sanic. beton. veronic. artemis. an. 3j. cons. ros.*

ros. rub. caryophyll. ʒſs. tormentill. ʒij. coquantur in aq. font. & vini Rhenani an. Ibj. vase clauso in B. M. collentur per manicam Hippocratis. Give ʒiv. of this Morning and Evening. Or take a few of each of these Plants well dried and cut, boil them, and then sweeten the Decoction with Honey or Sugar to the Palate of the Patient, and give him a Dish of it to drink twice or thrice a Day. You may aromatize it with Sanders, *cassia lign. or saffafraſs, &c.*

Externals. The external Applications have been already set down all along, as I treated of the several Accidents befalling the Head, whether made by Contusion, or Wound affecting the hairy Scalp, *Cranium*, or *Meninges* of the Brain. Yet for the more Confirmation of the young Artist, I shall make a short Repetition of what I have deliver'd concerning the Application of them, that he may not stagger in following the Doctrine here set down. I shall also supply you with more Variety of Medicaments, that you may not be to seek for Choice elsewhere.

In every Contusion of the Head, whether a Wound be join'd therewith or no, it will be necessary that in the first place you defend it from the Influx of Humours; and your Medicaments thereto ought to be refrigerant and exsiccant, to temperate the Heat, and dry up the Humours already extravasated. To which Purpose *Hippocrates* prescribeth this: Rx far. bord. ʒvij. ol. ros. ʒiv. coct. in aceto ad consist. *Cataplasmatis.* In Winter he added flor. ros. rub. pulv. ʒij. decocted in Wine. Others have since added bacc. myrtill. & balaust. the more to corroborate the relax'd Part. Before the Application of these the Hair must be shav'd, and the Head and Sides of the Neck embrocated *cum album. ovi, ol. ros. & aceto.* If there be a Wound with it, you ought to digest it with that *ex terebinth.* or this; Rx terebinth. Venet. ʒij. ol. hyperici ʒvj. thuris ʒij. vitell. unius ovi, Misc. or that of far. bord. cibrat. ol. ros. & vitell. ovi. These ought to be spread upon Pledgits, and dipt in ol. lumbric. hot. The Fluxion restrain'd, apply Discutients in the Form of Cataplasms, Cerots, or Emplasters; as *empl. Vigonis, de beton. de gumm. elemi, de matris sylva, cerat. ifidis:* Or Rx succi beton. ʒij. ol. ros. ʒiv. mastich. myrtillor. an. ʒj. pingued. hirci ʒſs. coq.

ad succ. consumption. colat. adde gumm. elemi, tacamahac. an. 5x. terebinth ʒijss. ceræ alb. q.s. iterum bull. ad confit. Cerat. or, Rx gumm. elemi ʒij. opopanax. ʒij. bdellii ʒls. resin. pin. ʒj. ceræ q.s. fiat Ceratum. In all Wounds of the Head *gummon. elemi* is much commended; it mitigates Pain, and corrects the evil Temper of the Part, by a particular Virtue it hath thereunto. Fabr. ab Aquapend. commends this Emplaster: Rx betone virid. Mvij. contund. contus. add ol. ॥ij. ceræ, terebinth. an. ॥ij. coquantur & exprimatur; colat. adde succ. beton. ॥bj. iterum coquantur ad succ. consumption. pro usu. And after Digestion of the Wound, you may deterge with such like; Rx terebinth. ʒij. mel. ros. ij. succ. plantag. apii, an. ʒjss. coq. ad succor. consumpt. de in adde far. bord. ʒj. sarcocollæ ʒjss. And afterwards incarn, by adding, myrrhæ, mastich. aloes, an. ʒss.

If the Contusion were without Concussion or Wound, and through Want of timely repelling it, it apostemate, treat it with Lenients, viz. ex rad. althææ, flor. melilot. far. bord. vitell. ovor. & ol. ros. And if it suppurate, open it, and dress it as aforesaid, with Digestives, &c.

If the Scull be fractur'd, lay it bare by cutting and raising up the hairy Scalp, fill the Wounds with Dossils, and apply over it the Cataplasm of Hippocrat. or such like, embrocating cum ol. ros. &c. as hath been said. At the second Dressing, digest it with ol. ros. cum resina, as before is directed. But if it be fanious, deterge with mel. ros. spir. vini, &c. as you see Cause, and dress the Lips of the wounded Scalp with this or the like: Rx terebinth. lot. in aq. salviae ʒj. ol. ros. ʒjss. gumm. elemi cum oleo super ignem solut. & colat. ʒss. croc. pulv. ʒj. vitell. ovi ʒj. Misc. By the speedy Digestion of this Wound you will facilitate your Cure.

After Digestion spir. vini will be found of good use, Spir. vini. it having such a siccant Quality as is requisite for these of what Use Wounds, not only for the *Calvaria*, but of the *Meninges*, either alone upon Lint or mix'd with mel. ros. or Cases. syr. de ros. sicc. Or use this following: Rx spir. vini ʒvj. myrrhæ ʒss. aloes ʒj. sarcocoll. thuris, an. ʒij. or this Balsam; Rx spir. vini ॥jss. vin. malvatici ʒvj. myrrhæ, thuris an. ʒx. pulv. rad. consolid. ʒj. pulv. centaur. min. ʒjss. flor. hyperici pulv. ʒss. terebinth. ॥ls. infund. in bal-

neo S. A. apply it warm upon the *Meninges*. If the *Dura Mater* have chang'd its Colour, and do not deterge with what is propos'd, then Rx terebinth lot. in vini. alb. 3ij. mell. ros. spir. vini, an. 3j. myrrhæ, aloes, sacchar. alb. 3ij. *Misc.* If these Wounds tend to Putrefaction, scarify the Lips of them, and apply this or such like; Rx Mithridat. 3vj. theriac. Venet. 3ij. mell. Ægyptiac. 3j. pulv. scord. myrrhæ, an. 3j. spir. vini q.s. The Putrefaction got off, you may then dress with this, *Zohan. Andreæ, a cruce*: Rx ol. terebinth. Venet. mell. ros. p. æq. apply it warm. All these Medicaments are to be applied upon a Sindon to the Membranes. A Sindon is a Piece of Silk or fine Linen cut round proportionably to the Perforation made in the *Cranium*, and is to be placed under the Edges of the *Cranium*, by the Lenticular Instrument, that those Edges of the fractur'd or perforated *Cranium* hurt not the *Dura Mater*. A Thread or Silk must be fasten'd to it, to pull it out at Pleasure. Apply over it soft Dossils of Lint, to fill up the void Space in the Bone, thereby to keep the *Dura Mater* from rising above it.

In Wounds of the Membrane of the Brain and the Brain itself, Rx succ. beton. 3iv. suce. calamynth. 3ij. flor. centaur. min. Pjss. hyperici contus. 3ij. vini. odoriferi 1ibj. Infuse these three Days, then boil them to the Consumption of the Juices; strain it, and add to it terebinth. claræ 3ij. gumm. elemi dissolut. in spir. vini 3ij. ol. hyperici 3jss. mell. ros. 3iv. boil these a little, then add pulv. myrrhæ, aloes, sang. dracon. thuris, an. 3j. Ol. Aparici prescribed in Wounds in general, is an excellent good Medicament in recent Wounds of the *Meninges* of the Brain. *Fabr. ab. Aquapend.* proposeth this in Wounds of the Brain: Rx far. millii 3ls. ol. Aparici 3j Mithridat. 3vj. bals. Peruvian. ex Ægypto 3ij. spir. vini 3v. and if

* Quære, whether. the Dose of Chalcantho 3js. Drop this (saith he) warm, and your Digestives over the Wound, then embrocate the Head and Parts about with ol. ros. and lay this Emplaster over all; Rx far. bordei 3vij. pulv. cham. 3iv. pulv. spicæ, schœnanth. an. 3ij. pulv. beton. stæchad. an. 3ij. ol. mastich. 1bs. ol. ros. 3iv. oxymel. simpl. 3v. vini alb. potent. q. s. flat Emplastrum. If the Bone be carious, and do not readily exfoliate, you ought to rugine it, and dress it with

with liniment. *Arcei*. If that be too relaxing, Rx spir. vini ʒx. myrrhae ʒj. aloes ʒſſ. rad. pucedan. aristoloch. cort. thuris. an. ʒſſ. pulver. & misceantur pro usu ; apply it upon Dossils. In dry Bodies this ; Rx pulv. aloes, pumic. ust. pompol. an. ʒij. myrrhae ʒj. pulv. ostr. combust. ʒij. mix them with mel. ros. & spir. vini, and apply this Emplaster over all ; Rx ceræ, resinæ pin. gum. ammoniaci, elemi, an. ʒvj. terebinth. ʒiiij. pulv. myrrhae, mastick. aristoloch. rotund. iros, aloes, opopanax. euphorb. an. ʒj. ol. ros. q. s. fiat Emplastrum. After the Wound is incarn'd, you may cicatrize it with one of these, or such like : Rx plumbi usti cum sulphure & loti, litharg. aur. an. ʒij. antimon. ust. & loti, cerusse, an. ʒj. ol. ros. q. s. fiat Unguentum ; or, Rx calcis putaminum ovor. calcinat. ʒſſ. alum. ust. ʒj. croci Martis ʒj. fiat Pulvis. Thus I have set you down Variety of Medicaments, whereof you may fit yourselves according to the Exigency of the Case. I shall now shew you some of my Work, wherein I used but a few.

I Was sent for to a young Fellow, who had been 1. *Observation of a Contusion without Wound or Concussion,* shrewdly cudgell'd about the Pate. He was sick in Bed, and dozed with the Pain. I look'd upon his Head, and saw it swell'd in several Places : Some of the Swellings were big and pappy, abounding with extravasated Serum. I presently look'd for the Jugular Veins, and seeing them full, I open'd the fairest, and took away at least a Dozen Ounces of Blood ; then caused the Hair of his Head to be shav'd off, and embrocated all his Head, Neck and Jaws, with a Mixture of ol. ros. myrtill. acet. cum album. ovor. and applied a Cataplasm over all his Head of far. bord. fabar. flor. ros. rub. balauſt. bacc. myrtill. decocted in Oxymel. A Clyster was that Evening administer'd, and an Anodyne Draught disposed him to Rest that Night. The next Morning I was inform'd he had slept at Times, but I found him hot, and his Pulse quick. I open'd the other Jugular Vein, and seeing him bleed with a full Stream, I permitted it to flow proportionably : Then having a Fomentation ready of Claret Wine, wherein had been infused flor. ros. rubr. balauſt. nuc. cypress. I took off the Dressings, and stuped them, and thought to have open'd one of these Tumours ; but seeing it diminishing, I forbare, and embrocated

brocated his Head again *cum ol. ros. myrtill. & aceto*, and applied the Cataplasm as before. By these Applications I dried up the Humour in a great measure before the seventh Day; then added some Cephalicks to the former Ingredients, and boil'd them in Wine and Water, with which I caused his Head to be fomented, and afterwards applied *Vigo's Cerat. ad contus.* During the first seven Days I permitted him only Water-greuel or Panada, and kept his Body soluble by Clysters: But afterwards gave him more Liberty and purg'd him: By which Method he recover'd, without any manner of laying open. And thus all external Contusions may be happily cured.

2. Observation of a Contusion, with an Ecchymosis opened.

A Person of Quality, aged between 30 and 40 Years, by Accident of a Fall out of her Coach, bruis'd her Head a little above the Right Temporal Muscle. She was stunn'd with the Fall, but did not vomit. She was dress'd by some of her Servants with such Medicaments as those of her own Sex advis'd. About 14 Days after, being indispos'd, she came to Town, and sent for me. I saw a large *Ecchymosis* remaining, and a Tumour of the Bigness of a Pheasant's Egg: It was soft, and seem'd to be full of corrupt *Serum*. There appear'd no Hopes of discussing it, and yet it was not safe to permit it to lie longer so near the Bone. Wherefore I applied a mild Caustick upon it, and dividing the Escar, gave vent to the *Serum*, and some Clots of grumous Blood; then fomented it with Wine, and dress'd it up with a Dossil spread with a Digestive *ex terebinth.* and *unguent. basilic.* over it upon the Escar, and embrocating the Parts about with *ol. cham.* applied *empl. diapalm.* with Compress and Bandage. At the next opening I saw the Ulcer well digested, and no Part of the Bone bare; nor was it painful in the Time of Dressing or afterward: Yet from the first Day I dress'd her, she usually fainted the while, and put us upon a Necessity of laying her down in her Bed some Time before we had finish'd our Applications; where after she had lain an Hour or two very sick, she recover'd again, and walk'd about her Chamber very well. Her Friends and Relations, who visited her often, and saw her thus distemper'd, suspected it to arise from the Wound; but I suppos'd it Vapours, and prevail'd with her to consult a Physician. The Physician being come, I took off the Dressings, and shew'd him

him the Ulcer well digested, and dispos'd to heal, without the least Sign of Ill: The Physician also concluded so. But before I had dress'd her up, she fainted, and was carried to Bed sick. These Faintings increasing, her Physician began to suspect it proceeded from the Contusion; but her recovering again so well afterward, confirm'd him that they were Vapours, and that by Purging she would be reliev'd. She complied, and was moderately purg'd once in three or four Days, whereby she was somewhat freed of these Fits, and I had Liberty to cicatrize the Ulcer. After which I made her a Fontanel in her Leg, and she retir'd to her House in the Country, where she took Physick, and recover'd perfectly well. If these fainting Fits had proceeded from the preceding Contusion, they would not so have intermitted and gone off as they did.

A Person of about 36 Years of Age was wounded ^{3. Observation of a} upon the Road, by a Blow with a Spintree-bar upon ^{contused} the *Os frontis*, near the Coronal Suture, about the ^{Wound.} Length of two Inches. I cleans'd the Wound with a Sponge, and clipp'd the Hair away: Then putting my Finger into the Wound, I felt the *Pericranium* sound and smooth; and seeing no Symptoms in the Patient of Fracture or Concussion, I brought the Lips of the Wound close together, dress'd them with a Digestive *ex terebinth.* upon Pledgets with an *empl. è bolo,* and Compress over it, putting him on a Linen Cap, and his Peruke over that. I forbare to let him blood that Night, in Consideration that he had bled much upon the Road. The next Morning, finding him in good Temper, I did neither let him blood, nor dress him; but the Day after I took off Dressings in the Presence of Dr. Cox, and Dr. Walter Needham. The Wound seeming near clos'd, I applied a Stupe or two wrung out of Red Wine, and dress'd him with *liniment. Arcei.* The second Day after I view'd it again, and seeing the bruis'd Flesh between the Lips of the Wound cicatrizing, I dress'd them with *unguent. tutiae*, and continu'd to do so every other Day. During his Cure, he kept his Chamber, and was heal'd in very few Days; whereas if his Wound had been filled with Dossils, a Fever would have follow'd, and other Accidents which would have confin'd him longer to his Chamber.

4. Observation of a Wound betwixt the Sagittal and Coronal Sutures.

A Coachman being wounded with a Rapier to the Bone, between the Sagittal and Coronal Sutures, about an Inch in Length, the next Barber dress'd him, and call'd in a young Chirurgeon to help him. They (as they said) felt a Shiver of the Bone cut off, and sticking in the Pericranium; whereupon they divided the Pericranium; and laid the Bone bare, filling the Wound up with Dossils. The Fellow being of a full Body, and the Blood fermenting, a Fever follow'd, and the seventh Day the Lips of the Wound and the Parts about were inflam'd and swell'd. They then dress'd the Bone with Dossils dipt in *spir. vini, & mel. ros.* and deterg'd before they had digested; by which the Bone was stain'd, and a Necessity follow'd of exfoliating it: whereas such an incised Wound might have been incarn'd by *liniment. Arcei.* But this Practice will not want those that will defend it: And who can help it?

5. Observation of a large Wound of the Calvaria.

A poor Woman near Ludgate coming out of her Chamber one Night, and pulling the Door to her by the Key, it slipt out, and she tumbling down Stairs, cut and raised up the hairy Scalp from the Beginning of the Lambdoides downwards. I caus'd the Hair to be clipt and shav'd away from about the Wound, and cleans'd it from the Blood, then brought the Lips close together by threc or four Stitches, embrocated the Parts about *cum alb. ovi, aceto, & ol. ros.* and dress'd her up with Agglutinatives, applying over all *empl. è bolo* and Bandage; then gave her an Anodyne Draught, and left her to rest. The next Morning I took off my Bandage and *emplast.* and embrocated the Parts about with *ol. ros. cum aceto*, applying a Cataplasm *ex farin. kord. & fabar.* decocted in Oxycrate, and adding *ol. ros.* I took away a little Blood by opening a Vein in her Arm, and prescrib'd her a Clyster of Milk and Sugar that Afternoon. I continu'd the Cataplasm Morning and Night, but dress'd not the Sutures till the third Day; and by that Time the Tumour being diminish'd, and the Wound inclin'd to Agglutination, I dress'd up the Wound again as before. At the next opening I cut out the Stitches, and dress'd the Wound with Sarco-ticks and *empl. beton* over all, instead of the Cataplasm; and in a few Days cured her of that Wound by Agglutination.

A young

A young Fellow, Servant to a Horse-Courser, was 6. Observ'd thrown off his Horse against some of the Bars in Smith-field, whereby the *Calvaria* or hairy Scalp was torn up from the Coronal Suture to the Temporal Muscle, on the Left Side; the Scull was bared between two and three Inches in Breadth. He was led to the next Barber, who cut the Piece off, and hang'd it up in his Shop. The Day after the Patient was brought to me. I caus'd the Hair to be shav'd off from about the Wound, and dress'd the Bone and Lips with *Liniment. Arcei* warm, embrocated the Parts about *cum ol. ros. & chamæmel.* and applied *empl. è bolo* over the Wound, with Com-pres and Bandage, rowling up his Head. He had been let Blood the Day before, without Consideration of the great Quantity which he had lost from his Wound. I continu'd the former Way of Dressing the Wound and Bone, until they were well digested: During which the Edges of the Bone incarn'd round. I rasp'd the Middle of the Bone, and thereby dispos'd a *Callus* to put forth. After Digestion, I deterg'd with *mundif. Paracelsi*; and as the *Callus* thrust off the Bone, I dress'd it with Pledgits dipt in *spir. vini* pres'd out dry, and afterwards by Epuloticks, as *unguent. tutix, &c.* cicatriz'd the Lips of the Wound even with the *Callus* which rose from the Bone; and about that Time, to dispose it the better to cicatrize, he was purg'd. Thus it was cured as Wounds with Loss of Substance; a troublesome and vexatious Work to the Patient and Chyrurgeon; which might at first have been cured by Agglutination, with a less *Cicatrix*, and thereby he might have enjoy'd the natural Tegument of his Hair, whereas now that Part remain'd bald and unseemly.

. A Servant of the King's, of about 28 Years of Age, 7. Observ'd being distracted, and suspicious that every Man he saw would do him a Mischief, walking Abroad one Day, thought himself pursued, and ran into the next House, up two Pair of Stairs into a Chamber, when hearing somebody following him, he threw himself out of the Window, just as a Coach was passing by, and pitch'd with his Head upon one of the Wheels. He was taken up stunn'd, and shrewdly wounded, carried into the next House, and dress'd by a Chirurgeon, who also let him Blood. The next Day I was sent, by his Majesty's Command,

mand to take Care of him, and saw the Dressings taken off. His Wound was between the Sagittal and Coronal Sutures to the Bone, with great Attrition of the hairy Scalp. I considering the Manner of his Fall, with the Frenzy and Stupor he lay under, open'd his Wound by a crois Incision, and cutting off the corner'd Lips, dress'd it up with dry Dossils of Lint, with Astringents and Bandage. I directed a Clyster to be administer'd that Afternoon, and let him Blood that Night, repeating it again the Day after. Dr. *Walter Needham* prescrib'd him an Emulsion of the cold Seeds, &c. to drink often in a Day. By all which he was notably reliev'd, and recover'd his Senses soon after. I open'd his Wound the third Day, and saw the *Cranium* smooth and natural, the Lips also tending to Digestion. I fomented it with a Stupe wrung out of Claret-Wine, and dres'd it up with a Digestive *ex terebinth. cum vitello ovi*, and embrocating the Parts about *cum oleo rosar.* applied *emplastr. dia-chalcit.* with Compress and Bandage. After I had thus digested the Wound, I rasp'd the *Cranium* to the quick, dressing it up with *unguent. Arcei*, and the Lips of the Wound with *unguent. Diapompholyg.* and by the Help of the Vitriol-Stone I deterg'd them: And as the *Callus* grew up out of the *Cranium* to unite with the Lips, I dress'd it with Pledgits press'd out of *spir. vini*, cicatriz'd it, and restor'd him cured.

8. Observation of
a great contused
Wound.

A Cook-Maid, by the Fall of a Jack-Weight upon her Head, was beaten down, and stunn'd for some while by the Blow: She vomited, and was carried into her Chamber. There were three Wounds in the hairy Scalp to the *Cranium*, with a great Tumour. The Bone seem'd to me to be depress'd and fissur'd. I presently made a circular Incision, and rais'd up that Part of the hairy Scalp in order to Terebration, and fill'd up the Wound with Dossils of Lint, press'd out of Red Wine; then embrocated her Head with *ol. ros. cum aceto*, and put on *empl. è bolo* with Compress: Then shaving the Hair from the Parts about, I applied Pledgits spread with my Digestive upon the Lips of the Wound, Compresses dipt in Oxycrate, and rowl'd up her Head. Some Hours after I caus'd her to be let Blood about eight Ounces, and that Night gave her 3vj. *syr. de meconio* in a Draught of *aq. papa-ver.* with a little *aq. cardiac.* The next Day I took

I took off Dressings, and viewing well the bare Bone, I found neither Depression nor Fissure. I was deceiv'd by the Shape of her Head, she being double crown'd, the Tumour great, and the Sagittal Suture running underneath. I fomented the Parts affected with *vin. rubr.* wherein were decocted *flor. ros. rub. cham. flor. beton. summit. absinth. bacc. Myrtill. &c.* then dress'd the Bone and Lips, the former with *liniment. Arcei* warm, and the latter with my Digestive *ex terebinth.* dipt in *ol. hyperici* warm : And having embrocated her Head well with *ol. ros. & cham.* I applied a Cataplasm *ex farin. bord. pulv. balaust. & ros. rubr.* decocted in Oxycrate *cum ol. ros.* with convenient Bandage. This Method I continu'd till the Wound was digested, and the Tumour wasted. Then I deterg'd the Lips of the Wound with *mundif. Paracels.* and the Vitriol-stone, dressing the Bone with Sarcoticks, and applied over all one of *Vigo's* Carrots instead of the Cataplasm. By this Method the Bone incarn'd ; after which she retir'd with Medicaments to be dress'd by some of her Fellow-Servants, at her Master's House a few Miles off. She sometimes came to Town, and was assisted by me in the cicatrizing of the Wound, so as hath been shew'd in the former Laceration of the *Calvaria.* I did not believe so great a Blow could have been without a Fracture and great Accidents ; otherwise I should not so presently have rased off the hairy Scalp.

A Tradesman returning from visiting some of his Friends in the Country, near Knightsbridge, fell off his Horse to the Ground, bruising and wounding his Forehead and Face. He was taken up for dead ; but some while after recovering Life again, they put him into a Coach, and brought him to his House. I found him in his Bed labouring under a great Concussion. He was not capable of giving any Account of his Ailment. His Face and Nose were much bruised ; there was also a Wound upon the *Os cribiforme.* I caused the Blood and Gravel to be wash'd out of his Wound, and with my Knife laid it open a little higher up towards the Forehead. Then viewing the Bone, and seeing it without Fissure, I brought the Lips close together, and dress'd the Wound with Agglutinations, and *empl. è bolo* over it : and his Face ; and having caus'd the Hair to be shav'd off

off the fore-part of his Head, from the Coronal Suture down to his Ears, and embrocated the diseas'd Parts with *ol. ros. cum aceto*, I applied a Cataplasm of *farin. bord. pulv. flor. ros. rubr. balaust. bacc. myrtill.* decocted in Oxymel, then let him blood 10 or 12 Ounces. A neighbouring Physician visited him that Night, and prescrib'd what he thought necessary. The Patient lay dozing all that Night, groaning frequently, and was no better in the Morning: He spake not willingly to any of us, nor so as we could understand what he said. That Day I took off Dressings, view'd and felt the Parts about. The Left Eye was inflam'd, the Lid swell'd, and the Forehead bruis'd. I was not able to make out any Thing whereby I might take new Indications; and therefore dress'd him up again as before, ordering a little Breast-Milk to be drop'd warm into his Eye, and renewing the Embrocation and Cataplasm. That Day he was let Blood again, and a Clyster administer'd, with what else his Physician thought necessary. The next Day he being nothing better, the deceas'd Mr. *Born*, a Chirurgeon, was consulted. We took off Dressings, and view'd the Wound. The Bone was fair, without the least Impression. Mr. *Born* concluded, that the Wound should be cured, without farther Enquiry into it; which accordingly was done in few Days after without Exfoliation. Blistering of his Neck and Shoulders, and cupping with Scarification was made; also Fontanelles behind his Ears; Fomentations and Plasters were likewise applied to his Head: But the Relief was small. Yet by these and frequent Purging, after 2 Month or six Weeks, he was so well as to get Abroad, but was indispos'd in his Head. His Eye was cured; but after he had follow'd his Affairs Abroad some Weeks, on a sudden that Eye-Lid fell down, and some Months after he lost the Sight of the Eye, without any outward Soreness, it being the Effect of the Concussion. He was alive at the Time of the Fire, and may be so still for ought I know. If ought was omitted for his Recovery, it was further Bleeding.

1o. Observation of another Concussion, with a broken Leg.

A Gentleman of about 30 Years of Age, coming out of *Hertfordshire* through *Tottenham*, and riding upon the *Causey* near an Inn, one empoying a Chamber-Pot out of the Window as he was passing by, his Horse started, and

and rush'd violently between the Sign-Post and a Tree which supported Part of the Sign. The poor Gentleman was beaten off his Horse, and lay stunn'd on the Ground. The People fetch'd immediately a Barber-Chirurgeon from *London*. Sir T. B. upon Notice of his Friend's Mishap, sent me thither; where I found the Gentleman lying upon the Ground, the People and the Chirurgeon gazing upon him. I felt his Pulse much oppres'd, the Right Brow bruis'd, and enquir'd whether they had let him blood. The Chirurgeon replied, he had open'd a Vein in his Arm, but it would not bleed. I replied, *We must make him bleed, though it be by slitting his Veins.* Turning his Head on one Side, I saw the Jugular Vein on the bruis'd Side turgid, and open'd it. He bled freely. After I had taken about 12 Ounces, the Blood ran down from his Arm, which had been open'd before and would not bleed. We bled him till he came to Life, and then he raved and struggled with us. Having stopt the Bleeding, we caus'd the People to carry him into the Inn, and put him into a Bed. All the while they carried him, and were making him unready, he roar'd and was very unruly, especially whilst they were pulling off his Stocking from his Right Leg; which enquiring more particularly into, we found broken short in the Middle of the Thigh-Bone, close by a bony Wen, (of the Bigness of a Tennis Ball.) Upon *A great bony Wen.* fight whereof we prepar'd Dressings, and endeavour'd to set the Fracture. He oppos'd us mainly in the Setting of it, and dressing it up. But some of the People holding him down in his Bed, we set and dress'd his Leg, as is shew'd in the Lecture of simple Fractures. But his Hands being at Liberty, he loosen'd the Bandage which we had put on the fractur'd Bones in Spight of our Resistance. We contented ourselves in what we had endeavour'd, and from that Time left his Leg to lie unset, he not permitting so much as as Plaister over it. We then prepar'd Applications for his Head, shav'd the Hair from that Side of the Temporal Muscle, embrocated the Part which seem'd to us affected, *cum ol. res. & acero*, and applied a Cataplasm of Bean-Meal (which was speediest to be had) boiled up with Oxymel, &c. he permitting it patiently. That bound on, I left my Assistant to stay with him, and return'd myself to *London*.

The

The next Day Sir T. B. sent for Sir *Charles Scarburgh*, and carried us with him to *Tottenham*, where we found the Patient raving, and, by their Report, he had done so all Night. We understood not one Word he spake. His Pulse was low and intermitting. Upon which Consideration Venæsection was deferr'd. What was necessary for him to take, the Physician then prescrib'd. His Bruise was upon the Temporal Muscle, a Part not to be laid open upon a bare Surmisse; wherefore we renew'd our Embrocations and Cataplasms, and left my Assistant to wait upon the Patient, Sir *Charles Scarburgh* making a Journey farther into the Country. The next Day I return'd, and finding the Patient raving as I had left him, I supposing his Distemper proceeded from an Inflammation of the Membranes of the Brain, and that by Venæsection only he was to be reliev'd, I let him Blood on the same Jugular as before, about 10 Ounces, and so proceeded every Day or second Day at least, the Patient bearing it well, and seeming to be reliev'd. His Pulse rose upon it, and he slumber'd sometimes, and took his Nourishment, which before he did not. About the seventeenth Day, I coming to *Tottenham*, met my Assistant going to *London*, who told me, that the Patient was grown more sensible of his fractur'd Thigh. I persuaded him back, rejoicing to hear that the Gentleman was so well: But coming near his Chamber, I heard him hollowing. It troubled me what to do. I knew his Bleeding had much reliev'd him; but the People, as also my Assistant, dislik'd my so often letting him Blood, and was wont abusively to say, *Now you shall see our Master let him Blood again*: They concluding, that I would be the Death of the Patient. However, I resolv'd to bleed him once more, and no more. This I declar'd, with the Necessity of doing it; and accordingly open'd the same Vein again, and held a white Stone Porringer to receive the Blood, which flow'd with a sprightly Stream, the Patient lying quietly the while upon his Back. I put the Porrenger into my Assistant's Hand, and seeing the Blood flow with much Vigour, I catch'd up hastily a Pewter Porrenger, purposing to take a little in that. (In Bleeding these Veins in the Neck, we usually holding the Porringer close to their Neck, it serves as a Bandage to intercept the Descent of the Blood.) I put

I put this Porrenger into my Assistant's Hands, with Pretence to make Dressing to lay upon the Vein ; but stood at a little Distance, looking my Patient in his Face, with a Resolution to bleed him until I saw his Countenance change: Which I did, and then stept to the Patient to stop the Vein. The while the Porrenger was taking away, the Blood ran out of it on one Side, it having been melted, and the Hole so cover'd by Solder, that I did not see it before. During the while he was bleeding I thought him long, and wonder'd to see so little Blood in that Porrenger from so full a Stream : But seeing the Bed so bloody, it was evident that when the melted Hole press'd not against his Neck, the Blood ran into the Bed, which deceiv'd me: But the Patient, upon taking a little of his Cordial Julep, refresh'd his Spirits. I sat a while by him, and left him pretty hearty. The next Day I return'd sooner than I used to do, being doubtful how I should find him : But, to my wonder, he was perfectly well in his Senses, and discoursed soberly of what Passages he remember'd in the Time of his *Delirium*. We presently prepar'd to set his fractur'd Thigh-Bone, it having lain seventeen Days unset, yet was without Inflammation, Tumor, or Pain. The *Callus*, I suppose, was thrust out at the Ends of the Bones, and that had cover'd the Asperity of them, and the large Bleeding and Disease had made Revulsion and Evacuation. We brought the Ends of the Bone together by an easy Extension, and dress'd it up as is usual in simple Fractures. In less than twenty Days the *Callus* dried, and his Leg was so strong as to bear him again ; and some Weeks after, he went Abroad about his Affairs.

A Youth about ten Years of Age was struck down ^{11.} *Observ-*
by a Blow of a Cudgel on his Head. I found him lying *vation of a*
upon a Bed depriv'd of his Speech, and the Use of his *Fracture*
Legs. Taking the Plaister off his Forehead, there was *with a long*
no Wound nor considerable Swelling ; but searching *Fissure and*
with my Fingers I felt a Depression of the Bone : Upon *Depression*
which, having advertis'd the Parents of the Danger of *of the Cra-*
the Child, and the Way of my Proceeding, I sent for *nium.*
the Chirurgeon, dwelling at the next Door, who had
applied the first Plaister, desiring to retain him for the
more constant Attendance. We made Dressings ready
in order to Dilatation ; then causing the Hair to be
shav'd

shav'd off, I made an Incision so large as to set on the *Terebra*, if Occasion should be, for the raising up the depress'd Bone. In dividing the hairy Scalp towards the Coronal Suture, I espied a Fissure running up from the fractur'd Bone beyond my first Incision; wherefore I laid the Fissure more open, out of which I saw a Quantity of serous Blood flow immediately forth. The Depression was a Piece of Bone as broad as a Three-Pence sunk under the Scull. I fill'd up the Opening with Dossils of dry Lint, and applied over all a Digestive *ex terebinth. & vitell. ovi* upon Pledgits, and *empl. è bolo*, with Bandage to keep them on. The next Day, in the Presence of Dr. *Barwick*, and some Country Physician, with Mr. *Arris*, Chirurgeon, I took off the Dressings, and set the Trepan above the fractur'd Bone, so to avoid the great Scar that must have been, if I had set it below the Fracture, and considering withal the Poriness of the Bone below. The *Terebra* set on, the Bone taken out, and the inner Edges smooth'd by the Lenticular Instrument, I put in a Levator, and rais'd up the depress'd Bone even with the rest: That done, I plac'd in a Sindon dipt in *ol. ros.* with a third Part of Resin; then with a round Dossil filled up the Bore: After which I open'd the Fissure with my Rugines, scraping away its Edges, that no *Sanies* or Matter might be detain'd, and dress'd up the Bone with *liniment. Arcei* warm, so as to give Way to the Lips to fall in; I desiring no more Opening than was necessary for Discharge of the Matter from within. Over these Dressings I applied *empl. diachakit.* malaxed *cum ol. ros. & aceto*, and with Compress and Bandage concluded the second Dressing. From that Time all our threatening Symptoms vanish'd. Indeed the first opening and letting Blood that same Night recover'd his Speech; and after this Dressing the Use of his Legs was also restor'd: Yet we kept him in the Dark, and to a slender Diet, allowing no Flesh. What concern'd Internals, Dr. *Barwick* took Care of. The other Physicians and Mr. *Arris* coming no more, I continu'd the same Method in my Dressing until Digestion, which was made in four or five Days. Then I added *mel. ros.* instead of the Oil, and afterwards incarn'd, by increasing the Resin, and lessening the *mel.* The Flesh rising in little Grains presently, after the Digestion was compleated,

Book V. Of Wounds of the Head.

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pled, and after a few Days cover'd the *Dura Mater*. I hasten'd the Exfoliation of the Bones by the Application of *tinct. Myrrhae*, and deterg'd the wounded Lips with *mundif. Paracelsi*. My Work being afterwards to keep down the loose Flesh, I rubb'd it frequently with the Vitriol or Alum-stone, and dress'd the Lips with *unguent. tutiae*, &c. whereby in less than six Weeks the Bones exfoliated, and the Wound being ready to cicatrize, I left it to the neighbouring Chirurgeon; the cicatrizing of these being for the most Part the Work of my Servant.

A Person was wounded near the *Vertex* (by a Blow [12. *Observation of a confused Wound by a Puncture in the Crown,* told you in the former Edition, but have been since inform'd it was) by a Puncture of a Dagger. He sent for a Chirurgeon, who dress'd his Wound, and cured it; during which, the Patient went daily Abroad without any Consideration of it. About the seventeenth Day, towards the Full-Moon, as he was coming Home one Morning, he felt his Legs faulter, and before he was got up Stairs into his Chamber his Tongue fail'd him. His Friends and Servants put him into Bed, and sent for me. They declar'd to me how he had been wounded such a Day, and the manner of his being seiz'd with the *Paralysis*. I saw a Necessity of laying open the hairy Scalp, and offer'd to go away, that I might send for some of my Servants to help me. He apprehending that I was leaving him as deplorable, catch'd hold of me, and would have spoke to me, but could not. He made Signs for Pen, Ink, and Paper, and endeavour'd to write, but could not form one Letter. He then threw himself down in his Bed, breathing out *Jes.* I prayed his Patience, telling him, I would return suddenly. But before I went, I let him blood 10 Ounces, and return'd again within an Hour, and found that he had lost the Use of his Arms. I consider'd the Wound, and concluding a Necessity of setting on a Trepan, I caus'd his Head to be presently shav'd, and made a circular Incision about the Wound. Then raising up the hairy Scalp smooth off with my *Spatula*, I both saw and felt the Bone, but could discover no Fault in it. I dried up the Blood with Sponges dipt in Vinegar, rais'd up the Lips round with my *Spatula* from the Bone, and with a fresh Spunge having dried up the Blood, I look'd

again under them; but could discover nothing ill in the bared *Cranium*. I then fill'd up the Wound with Dossils of dry Lint, and applied a Digestive *ex terebinth.* over the Lips, embrocating the Parts about *cum ol. ros.* and laid on a Cataplasm *& farin. bord. flor. ros. rubr. balauſt. in vino rubr. with syr. de ros. ficc. &c.* That Day Sir *Francis Prujean* gave him a Visit, and prescrib'd him a Clyster, Cordials, Juleps, and what else he thought necessary. The next Day was Full-Moon, at which Time the Brain is throught to rise high, and the Vessels are turgid; wherefore I deferr'd the setting on the Trepan, contenting myself with the letting him Blood again. All this while he was in a Fever, and depriv'd of his Speech and Limbs. The next Morning, between 10 and 11 of the Clock, in the Presence of Sir *Francis Prujean*, Serjeant *Pyle*, Mr. *Arris*, and Mr. *R.* who thought himself concern'd for his Servant, and had first dress'd him, I took off Dressings, and look'd into the Wound. We found no Fissure; however, there was a Necessity of perforating the *Cranium*. Wherefore, without Delay, I began to work with the Trepan, which I much prefer before a Trepbine, it being an Instrument which doth its Work lightly, and cutteth the Bone equally, or how you please, without pressing so heavily upon the Head, and is approv'd by all the Chirurgeons Abroad, being much to be commended before the Trepbine. After I had bored the Bone, and taken it out, I look'd into the Hole, and seeing the *Dura Mater* retaining its natural Colour, without Matter or Blood, I dress'd it up with a Sindon dipt in *ol. ros.* with a little Resin warm. This Way of Dressing was objected against, as I expected; but I dress'd it up, and assur'd them that I would cure this Patient without applying any other Remedy to the *Dura Mater* than these two simple Medicaments: But withal, I was much unsatisfied in myself, that such grievous Symptoms, as loss of Speech and Limbs, with a Fever, should afflict the Patient, and yet no depress'd Bone or Fissure, nor ought of Matter or *Sanies* appear upon the *Dura Mater*. This, I say, troubled me much, I fearing some other Place, or that the Blood lay putrified under the *Dura Mater*. But I dress'd it up with a soft round Dossil next the Sindon, and the Bone with *liniment. Arcei*, continu'd the Digestive to the Lips of

the Wound, and applied an *empl. de beton. mag.* over all, then laid him down in his Bed. Going presently out of his close Room (where I was crowded up with great Lights burning near me) into the fresh Air, I presently burst out with a violent Coughing of Blood: Yet the next Day I dress'd the Patient again, and found his Speech and Limbs restor'd; but he was hot, and his Pulse quick. I open'd his Wound, and finding all as well as I could expect, I dress'd up the *Dura Mater* again as before, with the same Oil and Resin: And after I had bound him up, as is usual in these Cases, I let him blood 10 Ounces, and advis'd the repeating of Clysters, &c. as Occasion should offer. The Physicians and Chirurgeons visited him no more after the first Dressing; but I retain'd the young Chirurgeon that had first dress'd his little Wound, he dwelling near the Patient. After three or four Days dressing, this Wound digested, and all the Symptoms went off. Upon which Consideration I diminish'd the Quantity of the *ol. ros.* and increas'd the Resin; making good my Word in curing him with those simple Medicaments; I deterging and incarning as firmly and speedily this Way as by any Sarcotick I ever us'd. Wh'le the Bones were casting off, I cicatriz'd the Lips as hath been set down in the preceding Observations. Coming once to dress him, while the Wound was cicatrizing, he being Abroad, I substituted the young Chirurgeon in my Place; yet I saw him twice or thrice dress'd afterwards. He was well cured, and remaineth so to this Day.

I was call'd to consult with Dr. Thomas Cox, about 13. Observation of a Gentlewoman who was grievously diseas'd with a great Pain between the Coronal and Sagittal Sutures, occasion'd by a Blow she had many Months before receiv'd, of the riding under a Pent-House. The Blow had stunn'd her, Brain. yet she recovering her Senses, was brought to London, and view'd by some Chirurgeons of the City, who cured her little Wound, and return'd her back: But from that Time her Pain increas'd daily with a *Vertigo*, and she return'd again to London. We judg'd it to arise from that Blow, and concluded the extravasated and putrefied Blood had caus'd that Pain. We view'd the hairy Scalp, and took Notice that it was thicker in the upper Parts of it than was usual; but we could not distinguish with

our Fingers any Inequality under it in one Part or other. The Humour was pituitous, and yielded to the Pressure of the Finger, as such Swellings do. She endeavour'd to point to us the Place with her Finger, but could not fix it within so narrow a Compass, as we might certainly relieve her by laying it open. At that Consultation we resolv'd to begin with Fomentations and Cataplasms, to discuss the Humour, and to make Derivation by Bleeding, Cupping, Blistering, and Purging: All which was afterwards done; but proving ineffectual, we propos'd the laying open that Part of the Scalp which appear'd to us most suspicious, and to set on a Trepan: But she would not admit of it. At length, feeling herself languishing, she yielded to the making a Fontanel in the Part most affected by a Caustick. Which I did, and, by Dr. Cox's Consent, I made it to the Bone, and so large, that I might afterwards set on a Trepan; and then dress'd it with Lenients. After Separation of the Escar, there appear'd neither Fracture nor Fissure. We moisten'd the Bone with Ink, and rubb'd it out again: But no Mark of the Ink remaining, I rasp'd it; and no Crack appearing, I sprinkled the Bone with *pulv. myrrh. aloes, &c.* and dress'd the Ulcer with *basilic. &c.* Her Pain increasing, with other Indispositions which threaten'd her Life, she yielded to the Application of a Trepan; which accordingly I set on, and opening the Skull, found the *Dura Mater* retaining its natural Colour, but a Smell arose from within, as in corrupt Wounds of the Brain. I dress'd it up with Lenients as the former, *viz. ol. ros.* and a little Resin. The next Day I dress'd her again, and found the Wound digesting; yet was she extremely stupified with the Excess of Pain in her Head. The third Day I dress'd her again, and in the Opening found good Digestion, and a Beginning to incarn, a little red Flesh arising upon the *Dura Mater*. The next Day it was increas'd, and so the next: But when I open'd it a Day or two after, I found the Lips of the Wound sinking, and little Matter; but that which appear'd was of good Colour. The *Dura Mater* seem'd drier, the little ruddy Flesh was not increas'd. The next Day the little Flesh upon the *Dura Mater* beginning to look pale, I then left off the *ol. ros.* and added, *mel. ros.* to the Resin, with a little *pulv. myrrhae*, and a few Drops
of

of *ol. terebinth.* and dress'd the Lips of the Ulcer with *unguent. basilic. mag. Vigon. cum ol. terebinth.* warm, laying over the bared *Cranium* Lint dipt in a Tincture of Myrrh, Aloes, &c. and applying *empl. melilot.* with a good Compress wrung out of a *Lixivium*, wherein was boil'd some of the greater Cephalicks, as *flor. anth. beton. majoran. origan. &c.* But that Night she was seiz'd with Convulsions, and the next Day after the Lips of the Wound appear'd without Heat; all Things look'd ill; and she died within a Day or two after. We would have open'd her Head, but she had forbid it: But in bowing her Head a putrid Matter of a brown Colour flow'd forth her Nostrils, of the same Smell that I complain'd of in Trepanning the Bone; only more foetid. I believe this Putrefaction proceeded from the corrupt Blood extravasated between the *Pia* and *Dura Mater*; which at first, by large Bleeding and proper Applications, might have been reliev'd. Nay, possibly, if we had timely open'd the *Dura Mater*, this Matter might have there discharg'd itself. But if it had been attempted, and not succeeded, her Death would certainly have been imputed to that.

A little Girl was brought to me with a soft Swelling ^{14. Obser-} upon the Left Side of her Head, about two Fingers off ^{vation of a} the Temporal Muscle, of the Bigness and Shape of half ^{large Fif-} a great *French Walnut*. This Swelling happen'd from ^{sure, the} a Fall down a Pair of Stairs some Weeks before: But, ^{Dura Ma-} whether through Ignorance or Negligence, the Fracture ^{ter putri-} was not suspected by them, though there were visible ^{fied.} Symptoms of a Concussion, as that of Vomiting, &c. The Child even languishing of it, I acquainted the Mother, that the only Way to relieve her Child was by opening that Tumour wide, and afterward I suppos'd that there requir'd as much to be done to the Scull underneath. She prayed my Help, and submitted to the laying open the Swelling, or what else I should think fit to be done. The Way of Opening this in a stronger Body, had been, to have cut round the Tumour, and rais'd off the Skin: But the Child was so weak, that I fear'd it might the while die under my Hands. Wherefore, to avoid that Danger, I applied a mild Caustick, and deliver'd the Child to her Mother, who bound on the Dressings, and carried her Home. About two Hours after, I took off the Caustick, and finding it had

work'd well, I divided the Escar, and discharg'd about three or four Spoonfuls of a filthy *Sanies*. I took off this Caustick the sooner, suspecting lest it might by longer lying penetrate through, and offend the Parts within. Upon dividing this Escar, the Bone appear'd bare the whole Length, and a long Fissure ran transverse over from the Temporal Muscle backward: The Scull was very thin, yielding to the least Pressure of my Finger, as a Piece of Vellum; so that I might have enlarg'd it with my Knife, if I had thought it necessary. I bow'd the Child's Head on one Side, and dropt in a little *mel. ros.* with a few Drops of Tincture of Myrrh, Aloes, &c. and with Pledgits dipt in the same, lightly cover'd up the Bone. Then dress'd up the Escar with *unguent. basilic.* malaxed *cum ol. liliorum*, and laid a Cephalick Emplaster over all, with convenient Bandage. I continu'd the same Method of Dressing daily, and saw Pieces of the *Dura Mater* purge out, and hang in the fissur'd Edges of the Bone; and for some while a thin *Ichor* issud thereout: The Escar being separated, I dress'd the Lips with *mundif. Paracelsi*, and the Bone with *liniment. Arcei*, dropping into the Fissure the Balsam prescrib'd by *Vigo*; by which it incarn'd, and, as the Bone exfoliated, united with the Lips of the Ulcer. There was a Tumour behind the Ear, before I began the Cure: But by embrocating it with *ol. ros.* daily, it went off after the Digestion of the Ulcer above. Thus this Infant was cured: But she being the Product of a diseas'd Mother, grew lame about a Year after, of a Pain in her Right Hip, whether it happen'd by Accident of a Fall, or that it was Strumous; but when I saw it, it was dislocated; I suppose no rational Man will believe this Accident on her Head occasion'd that Defluxion on her Hip.

15. Observation of
Caries
through
the Crani-
um, where-
in the Peri-
cranium
and Dura
Mater were grown together.

A Gentlewoman fell down with her Child of half a Year old in her Arm. The Mother was hurt, and the Child a little scratch'd on the Left Side of its Head. It was view'd by some Pretender to Skill in such Things, and judg'd inconsiderable: But from that Time the Child grew indispos'd, and vomited often, especially after the receiving her Sustenance; and as she grew able to speak, complain'd of a Pain in that Part of her Head; and by

reason

reason of her often vomiting, and constant Pain in her Head, she languish'd daily. After 10 Years, a small Tumour appear'd in that Part of the Head where it had been hurt. They again consulted, and afterwards brought the Child to me, a very Starvling. I view'd the Tumour, and felt in it a Pulsation, which at first I thought an *Aneurisma*; but pressing my Finger more into it, I felt the Membrane of the Brain without any Scull the breadth of an old *English Shilling*. This at first a little amaz'd me: But upon Consideration of the Fall, and the Symptoms succeeding, it was evident to me, that by the Fall the Scull was fissur'd; and being of a thin cartilaginous Substance, at that Time of her Infancy, had thro' Continuance, moulder'd away; and the *Dura Mater* thrusting outwards, had, by Adhæsion to the *Pericranium*, united in one Body with it. This I suppos'd the Case. The Presage here was a sudden Death, if the Cure was not attempted; and in the attempting it, she was in great Danger. To begin this Operation by a circular Incision the Compass of the Tumour in the Scull, was not difficult: But then to separate these two Membranes, the *Dura Mater* from the *Pericranium*, or this from that, was an hard Task even in a dead Body; here in a weak Child much more, where the Blood would be apt to blind me, and the Impatience of the Child render it hazardous, the Work of Separation requiring a great Steadiness in both of us. Wherefore I resolv'd to lay the Scalp open by Caustick. To which Purpose, I forewarn'd them first of the Danger, either in leaving the Child to die by its Malady, or in attempting the Cure doubtfully. But they having consulted others before, were sensible of the Danger the Child was in by its Disease, and readily commended her into my Hands, and lodged her near me. I caus'd the Hair to be shav'd off from the Tumour, and applied upon it the most gentle Caustick I could design. At such Time as I thought it might have made its way through the Superficies of the *Calvaria*, I took it off, and with a Caustick-stone rubb'd into the muscular Skin; then wash'd out the Salts well, with Wine first, then Milk. After that, I embrocated it with warm Oil, and cut into the Escar, embrocated the Part again, and dress'd it up *cum unguent. basfic.* with *ol. ros.* applying *emplastrum à bolo* over

over all, with Compress and Bandage. That Night she was seiz'd with a Fit of Convulsion, frequently vomited, and was very ill. Dr. Fisher was fetch'd, and prescrib'd her a Cordial Julep proper in her Case, and reliev'd her. The next Morning I took off Dressings, and rais'd up the hairy Scalp round from the Scull so far as the Caul-tick had spread, which gave a breathing to it, and discharg'd a little *Ichor*. From that Time her Vomiting ceas'd, as also the Convulsive Fits, and she began to be more lively than in 10 Years before. We kept her in Bed warm and close, and prescrib'd her a slender Diet, allowing her only Spoon-meats. Her Physician took care in what concern'd her Health by Internals. I proceeded to hasten Digestion, and by Fomentations, and the like, to cherish the Native Heat of the Part. Some Places I digested, others I deterg'd. It was a nice Work, but succeeded happily. Whilst some Sloughs were separating, other Parts incarn'd and cicatriz'd. The Patient at length being in a fair way of Recovery, I invited Sir Charles Scarburg and Dr. Walter Needham to see her dress'd. The *Dura Mater* was then incarn'd, and the Edges of the Bone exfoliating; after which the Wound cicatriz'd, and contracted to a very narrow Compas. The Child afterwards return'd to her Friends perfectly in Health, and is a witty Child; but it's thought she will be but a Dwarf.

16. Observation of a large Fissure by Contusion without a Wound.

A Person of Honour, about 10 Years of Age, by Accident of a Fall from his Horse, bruised his Head on the Right Side, a little above the Temporal Muscle. He was somewhat stunn'd by the Fall, and vomited. Going to him within an Hour after, I felt a large Tumour in that Place; and judging the Scull to be fractur'd, propos'd the laying it open. But the Physician not being come, I open'd the Jugular Vein on that Side, took away some Ounces of Blood, and prepar'd Dressings. Dr. Lower being come, I laid open the *Cranium* by a circular Incision; and discovering a Fissure, fill'd up the Place with Dossils of dry Lint, *pulv. Galeni & empl. è bolo*, with Compress and Bandage over all. The next Morning we found our Patient reliev'd; a Clyster was administer'd that Day; and the Day after, the Physician and Mr. Hollier being present, we took off Dressings, and saw a large Fissure stretching from the Coronal Suture

ture to the Temporal Muscle. The Serosity being discharg'd thereby, and the Patient freed from the preceding Symptoms, I did not think it necessary to set on a Trepan; but it being by others thought reasonable, to prevent farther Dispute, I complied with them. But then the Patient's Relations and Friends desir'd to be inform'd what Instruments we would use, and ask'd to see them. I shew'd them a Trepan and Trepbine, and gave them Liberty to try both upon a Scull. They did so; and unanimously preferr'd the Trepan, which accordingly I set on in the declining Part, somewhat distant from the Fissure; and after Perforation, dress'd the *Dura Mater* with *ol. ros.* and Resin, the *Cranium* with dry Lint, and the Lips with a Digestive *ex terebinth.* &c. then embrocated the Parts about, and applied *empl. è bolo* with Bandage. By the Application of these, the *Dura Mater* digested, and soon after incarn'd. But the Serosity discharging by the Fissure, the Evacuation by the Perforation of the Trepan was small, and thought not sufficient. I being desirous to justify my Way of Dressing, yet ready to comply with the common Practice, dress'd it up with *mel ros.* & *spir. vini.* But the Mater at next Dressing appear'd less; and the Day after, we found the ruddy Flesh upon the *Dura Mater* pale and withering. I applied again the *ol. ros.* and Resin, and at the next Dressing saw the Flesh ruddy and better digested; and after a Dressing or two, the Membrane so incarn'd, that I was glad to keep it within Compass by the Application of a Dossil of dry Lint: And from that Time my Busines was to suppress it with *Merc. præcipitat.* and good Compression. During this, the *Cranium* was dress'd with Pledgits press'd out of *spir. vini*; and while the Bone was exfoliating, we deterg'd and cicatriz'd the Lips, disposing them to incarn with the Flesh rising from the exfoliated Edges of the Bone. At length the Bone chang'd Colour, and shook. It appearing afterwards loose, I rais'd it up with a *Spatula*, and took it off; we supposing it an Exfoliation. But by the Pulsation of the Flesh under, it appear'd to be both Tables of the *Cranium*. If you will ask the Occasion of this, I must tell you, that, according to our Judgments, it was the Effect of the Contusion, of which there indeed appear'd no Marks; yet, without doubt, by the Force of

of the Blow the Heat was extinguish'd in the Bone, and as a dead Bone it separated. And this Sort of Contusions is taken Notice of by the Antients. It is without Danger to the Patient, if there be a sufficient Discharge otherwise for the Matter, as here there was by the Fissure. This Pulsation lessen'd as the Flesh grew callous and harden'd, which it did soon after into a Bone. About which Time the fissur'd Bone cast off its Edges, and that Fissure incarn'd, and supplied the Place of the Bone; the Wound also cicatriz'd by the common Epuloticks. This young Person had formerly been subject to Pains in his Head and frequent Vomiting from his Infancy, upon which Account we did not hasten the cicatrizing it; but after Purging, &c. we cicatriz'd, and he enjoyeth a better Health since.

17. Observation of a Fissure, with a Fracture and Depression of the Cranium under the Temporal Muscle. A young Fellow, a Mason by Trade, being at work with others, making a Stack of Chimneys three Stories high, the Foundation of the House sunk under him. He was taken up speechless; but being presently let blood by a Noble Lady's Advice, he recover'd his Senses, and was remov'd to his Lodging. The Part contus'd and swell'd was the Right Temporal Muscle, and that Side of his Head. He vomited often, and had shrewd Symptoms of a Fracture: I caus'd the Hair to be shav'd off, and made an Incision in the upper Part of the Tumour, from his Ear forward, above two Inches in length, passing as near the Temporal Muscle as I durst; and having at the same time divided the *Pericranium*, I thrust it off from the Bone; then with a Sponge press'd out of Red Wine, wiped away the Blood, and saw a Fissure running the whole Length of the Wound. I also espied another Fissure stretching from this downwards towards the external *Canthus* of that Eye; and the lower I press'd with my Finger, the more rough the Bone felt. I was unwilling to cut the Temporal Muscle; but there seeming to me a Necessity of it, I drew my Knife downward, and laid open the Wound in the Form of a Roman T. But the lower Lips, being muscular, would not so turn back to bare the fractur'd Bone as I design'd; therefore I contented myself with what I had done, and fill'd up the Wound with Dossils of Lint, embroccating the Parts about with *ol. ros. cum album. ovi*, and applying *empl. è bolo* over it, with Compress and Bandage; then

then laid him to rest with an Anodyne Draught. The next Morning I found the Patient in a Fever. He had rested ill, and had vomited often, and complain'd of much Pain in that lower Jaw: I took off the Bandage and Emplaster, and dress'd the Lips of the Wound with a Digestive *ex terebinth*, &c. upon the Pledgits dipt in *ol. hyperici* hot, embrocating the Parts about with *ol. cham. & ros.* and applied a Cataplasm *ex far. bord. flor. ros. rub. balauft.* &c. as you may find it describ'd in the Method of Cure. Then we let him bleed in that Jugular, and advis'd a Clyster; a Ptisan and contemperating Juleps were also made him. Having afterwards consider'd of the Necessity of making more way to the depress'd Bone, and the Danger which might happen by cutting off more of this Muscle, I resolv'd to consult Dr. Walter Needham: To which Purpose I sent to him, and he accordingly met me the next Day. We found the Patient restleis, and accompanied with an Increase of all the foremention'd ill Symptons. We took off Dressings, and discern'd the upper Lips of the Wound digested, but the lower more dry and swell'd, especially upon the lower Part of the Temporal Muscle; upon the Pressure whereof, a white Matter discharg'd from within, between the *Cranium* and muscular Flesh, where we judg'd the Depression of the Bone to be. There was a Necessity of cutting off Part of the Temporal Muscles, and that in the Form of a Semicircle: Wherefore we mark'd it with Ink from the upper Part, so passing within an Inch or more of the external *Canthus* of the Eye, and carrying it towards the Ear, to take off that Lip which was lying over the Depresure. This being so mark'd, we cut it off. There was an Effusion of Blood out of both Ends of the Arteries; but having Dossils ready dipt in the Royal Stiptick, we applied them; and having fill'd up the bared *Cranium* with our Dressings, we bound up the Wound. From this Time his Jaw was so weak, that we were forced to muffle it up with Chin-cloaths. At our next Dressing we set on a Trepan; after which, with a Levator, we rais'd up the depress'd Bone, and dropt into that Wound a Solution of *resina in mell. ros.* We then dress'd the trepann'd Hole with *ol. ros.* upon a soft Dossil; and the rest of the *Cranium* we cover'd with Dossils press'd out of *spir. vini*, and applied Digestives over

over the Lips of the Wound. At the second Dressing, Dr. Walter Needham was present, and saw the *Dura Mater* under the trepann'd Bone incarn'd so well, that from that Time we only applied a little round Dossil to keep the Flesh from thrusting out of it. But from the Fracture below, much purulent Matter came away daily: We suppos'd it was the more increas'd, by reason of the Hollowness which it had made between the Muscles and fractur'd Bone, which being depending, did yet retain its Cavity, notwithstanding our Endeavours by Compress and Bandage. Therefore, to prevent the enlarging of that Cavity, we applied a Caustick on the outside, and the next Day divided it; from which Time the Matter discharg'd itself that way, and thereby the internal Cavity was dispos'd to cure. The Fissure that stretch'd itself from his Ear towards his Brow did lie so undiscover'd, that we neither saw Beginning nor Ending of it; nor did we care: that Part of it which we saw, serv'd to discharge the *Serum* sufficiently. I rasp'd the *Cranium*, and cover'd it up with Dossils dipt in *spir. vini*, &c. keeping them close to the Lips of the Wound; and by timely rubbing the aforesaid Lips and every Super-excence with the Vitriol-Stone, I kept the *Cranium* dry, and dispos'd it to exfoliate. After the Discharge of Matter ceas'd from within the *Cranium*, I left the Exfoliation and incarning of it to my Servants, visiting the Patient but seldom myself. His Wound was cicatriz'd in less than two Months; as indeed they all usually are, if they be treated as they ought. But if they fall into such ignorant and obstinate Hands, who suffer the *Cranium* to be overgrown with loose Flesh, a great Discharge of Matter will follow, and the *Cranium* must of Necessity corrupt, and consequently the Cure must be prolonged.

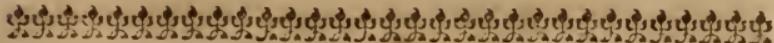
18. Observation of a Soldier wounded in the Head.

During the Wars, I was frequently employ'd in the dressing some one Person or other, wherein I have seen all or most of the several Sorts of Fractures mention'd in this Chapter. Particularly at the Battle at Worcester, a Soldier came to us where we were dressing, with his Sword in his Hand, the Blade broken off near the Hilt, with many Wounds on his Head. I seeing the hairy Scalp of one Side of his Head hanging down his Neck, went to him; and calling my Friend Will. Clarke to

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me with a Sponge to cleanse the Wound, we saw six Pieces of the Scull sticking on it: some of them were of the first Table, others of both Tables. Besides which, there were various Fissures, *Sedes*, and some Fractures, with Depression, made by Sword, Musket-Stock, &c. We freed the Scalp of those Bones, and return'd it upward so far as we judged it necessary; then cutting off what was superfluous, tack'd it to the sound Parts by several Stitches distant from one another, leaving a Space to dress the Depression and greater Fractures. Then we dres'd up the Wounds with Digestives *ex terebinth.* &c. and where the *Dura Mater* lay bare, we applied Pledgits dipt in *ol. ros.* and to the other Parts of the *Cranium, liniment. Arcei.* The Alarm growing hot of the Enemies entering the City, I left Will. Clarke to bind it up, and made my Way out of the Town. But this young Chirurgeon, being taken busied in dressing the wounded Soldiers, had Liberty, after the Heat of the Fight was over, to employ his Charity in dressing some of them, and writ me since this Soldier's particular Case; viz. The third Day he found him pretty hearty, and his Wounds mattering so very much, that he was necessitated to cut loose two of the Stitches, to give Vent to it: Then he dress'd the penetrating Wounds with *mel. ros.* and the *Cranium* with Lint pres'd out of *spir. vini*; and proceeding accordingly in the Cure, saw the depress'd and mangled Bones cast off, incarn, and cicatrize with the rest. The Soldier being thus cured by him, made a Voyage to the *Indies*, and since that serv'd a Soldier in the Tower of *London*.



An Additional Discourse of Wounds of the BRAIN.

THE greater Symptoms that are usually said to attend *Uncertain-* the Wounds of the Brain, do shew themselves more *ty of Sym-* uncertainly than a speculative Chirurgeon would imagine; and in Cuts or Wounds made by sharp Weapons, *the Brain.*

pons, or sudden strong Force, more uncertainly than in Contusions, Concussions, and Depressions of the Scull; the highest of them, viz. Vomiting, Stupor, Loss of Speech, with a *Paralysis* of Legs and Arms, arising more suddenly in these latter Cases than in the former. These Symptoms have appear'd in one of the foremention'd Observations, where there was nothing of Fissure or extravasated Blood seen upon the *Dura Mater* after the Terebration or Perforation of the *Cranium*: Nay, we see many die suddenly from a Box on the Ear, and from small Blows or Wounds. In some whereof, upon opening the *Cranium*, there hath been much Blood extravasated: In others none at all, or ought else that may be thought to have kill'd the Patient.

*Observa-
tion.*

A young Man, by reason of a Blow with a Cudgel upon the Forehead, presently took his Bed, and became delirious: A *Sopor* follow'd, and after some Days he died. I was fetch'd to see his Head open'd. In opening his Forehead, I saw a small Hair, like a Fissure, running from the great *Canthus* of the Eye upward. We took off the Scull and *Dura Mater*, and found but little Blood extravasated, the *Pia Mater* as little alter'd.

Others I have been call'd to see open'd, where there had preceded only a Contusion of the *Calvaria*, without any Fissure, or more extravasated Blood than is usually seen in every opening or taking off the *Cranium*; yet the Patient lay, as I am inform'd, under all those Symptoms of *Delirium*, *Coma*, &c. Then again, I have dress'd many that have been cut through the Scull, the Shivers of Bones lying pash'd with the Flesh and Hair upon the *Dura Mater*; yet the Patient hath been without any Symptom of such a Wound: which, I suppose, happen'd by reason of the Bones lying loose upon the Membrane.

*Observati-
on.*

At *Sterling*, Mr. *John Chace* was present, when a poor Servant-Maid came to me to be dress'd of a Wound she had receiv'd on her Head by a Musket-Shot, in the taking of *Calender House* by the Enemy. There was a Fracture, with a Depression of the Scull. I set on a Trepan for the Elevation of the depress'd Bone, and for Discharge of the *Serous*. She had labour'd under this Fracture at least a Week, before she came to me; yet had none of those Symptoms aforemention'd. But after

Per-

Perforation, and raising up this depress'd Bone, and dressing her Wound, she went her way, and came daily thither to be dress'd, as if it had been only a simple Wound of the hairy Scalp. Mr. Penycuke, an eminent Chirurgeon of that Nation, did assist me in this Work. I think the Brain itself was wounded. I left her in his Hands, who I suppose finish'd the Cure.

At the beating up of some of our Out-guards near *Observation*, the Enemy pursuing them, a Trooper, wounded between the Right Brow and Ear, espying me amongst the Crowd, importuned me earnestly to dress him, and would admit of no Excuse. We stopt at an Apothecary's House on the Right Hand going out of the Town towards *Perin*. I call'd to the Apothecary's Servant to bring somewhat to dress him. Mean while I hastily lifted up the bloody Hair, and saw a Quantity of the Brain lie among it. I took it up with my Fingers, and shew'd it him; the Sight whereof so calm'd his Passion, that I had Liberty to fly from the Enemy, who was enter'd the Town. Here the Prognostick was certain, yet there appear'd none of those cruel Symptoms which accompany Concussions or lesser Fissures.

From Battles, and Sieges of Towns and Garisons, we meet with many such Wounds: In them we hasten our way to the Extraction of extraneous Bodies, by cutting off the shatter'd hairy Skin first, then pulling out whatever was carried within the *Cranium*. If this be well perform'd, we then dress up the Brain and Membranes with a Sindon of Silk or soft Linen, of a Bigness proportionable to the Wound, dipping it in a warm Digestive, such as is proper for the wounded Membranes. For however Chirurgeons have propos'd to dress'd the Brain with one Kind of Medicament and the Membranes with another; that is not possible to be done: For if the Membranes or *Meninges* should be wash'd with the same Medicament, and be offend'd by the Acrimony thereof, Inflammation, Fever, and *Delirium*, will the speedilier follow. Therefore, in the Cure of these Wounds of the Brain, I consider the Brain as an insensible Body, and that the dressing of them consists in keeping it within its Membranes, and treating it as Wounds of the Membranes, with Lenients, &c. If this can be done, as in small Wounds of the Brain it

Manner of
dressing the
Brain.

doth sometimes happen, (if the Fracture of the Scull hath not been very large) then the Patient may recover.

But if the Fracture in the Scull be large, and the Wound in the Brain proportionable, so that the Brain cannot be retain'd within them; then it corrupts by reason of the external Cold, and offends the Membranes by its putrid Acrimony, and is frequently the Cause of all the ill Accidents that attend them. The Patient sometimes lives until that Lobe be consum'd, or hath wrought itself forth; as for Instance:

i. Observation of a Fracture of the Cranium by Musket-Shot.

AFew Days before the Battle at Worcester, while we were dressing the wounded Soldiers, one was brought to us shot with a Musket-Bullet on the Right Side of his Head. My Servant Will. Clarke, now dwelling at Bridgenorth, in dressing his Wound, felt the Shot sticking deep in the Scull. I hasten'd to him, and saw the Man speechless. We laid the *Cranium* bare by a circular Incision, and permitted it to bleed awhile; then cleans'd it with a Sponge press'd out of Vinegar, and fill'd it up with dry Lint. After an Hour or two, the Bleeding being stopt, we open'd the Wound again, endeavouring to get out the Bullet; but it not yielding thereto, we set on a Trepan close by it in a depending Part, and gave Vent to a Quantity of Blood: then passing in a Levator, we rais'd up the Bullet, and pull'd out the depress'd Bones, with which there came away some Blood, and a little of the Brain. This being wiped away, there appear'd a large Wound in the *Dura Mater*. We dress'd it with a Sindon dipt in *ol. ros. & resina*, and fill'd up the Cavity with Dossils of Lint. Having so likewise dress'd up the trepann'd Bone, we applied our Digestives to the Lips of the Wound, with *empl. è bolo*, and Bandage over all. Before we had dress'd him up, he lifted up his Eyes, and ask'd how he came amongst us. Several other things he demanded of us. We caus'd him afterwards to be remov'd, and continu'd our Care of him. The Wound did digest, and somewhat of the Brain came away each Day; yet his Speech continu'd: But what became of him after our Defeat, I do not know.

At the Siege of *Melcomb-Regis*, a Foot-Soldier of 2. Observation of a Lieutenant-Colonel *Ballard's*, by the grazing of a Cannon-Shot, had a great Part of his Forehead carried off, fractur'd and the Scull fractur'd into many Pieces, and some of *Scull*. it driven with the hairy Scalp into the Brain. The Man fell down as dead, but after a while mov'd; and an Hour or two after, his Fellow-Soldier seeing him endeavour to rise, fetch'd me to him. I pull'd out the Pieces of Bones and lacerated Flesh from amongst the Brain, in which they were entangl'd, and dress'd him up with soft folded Linnen dipt in a Cephalick Balsam, and with Emplaster and Bandage bound him up, supposing I should never dress him any more. Yet he liv'd 17 Days; and the 15th Day walk'd from that great Corner-Fort over-against *Portland*, to the Bridge which separates *Weymouth* from *Melcomb-Regis*, only led by the Hand of some one of his Fellow-Soldiers. The 2d Day after, he fell into a *Spasmus*, and died, howling like a Dog; as most of those do, who have been so wounded. About the same Time, a Maid-Servant was shot into the Right Side of her Head by a Musket-Bullet deep into the Brain. She liv'd so long, till that Lobe of the Brain wrought out or corrupted.

At the Siege of *Taunton*, one of Colonel *John Arundel's* Men, in storming the Works, was shot in the Face by Case-Shot. He fell down, and in the Retreat was carried off among the dead, and laid into an empty House by the way until the next Day: When in the Morning early, the Colonel marching by that House, heard a knocking within against the Door. Some of the Officers desiring to know what it was, look'd in, and saw this Man standing by the Door without Eye, Face, Nose, or Mouth. The Colonel sent to me, (my Quarters being nearest) to dress the Man. I went, but was somewhat troubled where to begin. The Door consisted of two Hatches; the uppermost was open, and the Man stood leaning upon the other Part of the Door which was shut. His Face, with his Eyes, Nose, Mouth, and Forepart of the Jaws, with the Chin, was shot away, and the remaining Parts of them driven in. One Part of the Jaw hung down by his Throat, and the other Part push'd into it. I saw the Brain working out underneath the lacerated Scalp, on both Sides, between

his Ears and Brows. I could not see any Advantage he could have by my Dressing. To have cut away the lacerated Part here, had been to expose the Brain to the Air: But I help'd him to clear his Throat, where was remaining the Root of his Tongue. He seem'd to approve of my Endeavours, and implor'd my Help by the Signs he made with his Hands. I ask'd him if he would drink, making a Sign by the holding up a Finger. He presently did the like, and immediately after held up both his Hands, expressing his Thirst. A Soldier fetch'd some Milk, and brought a little wooden Dish to pour some of it down his Throat; but Part of it running on both Sides, he reach'd out his Hands to take the Dish. They gave it him full of Milk. He held the Root of his Tongue down with the one Hand, and with the other pour'd it down his Throat, (carrying his Head backward,) and so got down more than a Quart. After that, I bound his Wounds up. The Dead were remov'd from thence to their Graves, and fresh Straw was fetch'd for him to lie upon, with an old Blanket to cover him. It was in the Summer. There we left that deplorable Creature to lodge; and while we continu'd there, which was about six or seven Days, he was dress'd by some of the Chirurgeons, with a Fomentation made of Vulnerary Plants, with a little Brandy-Wine in it, and with Stupes of Tow dipt in our common Digestive. So we bound him up.

I could tell you of many more wounded into the Brain; but I think these may serve to prove what I would demonstrate, *viz.* That the Brain is of itself insensible; that those Symptoms which accompany these Wounds, proceed from the Pain which the *Meninges, Dura* and *Pia Mater*, suffer; which, if oppress'd by extravasated Blood, or a Depression of the Scull, do quickly suffer the greatest Symptoms, as Vomiting, *Stupor, Paralysis, &c.* much more if they be prick'd by any Speel of a Bone, or other extraneous sharp Body. When the Brain itself ouzeth out between them, in the manner already mention'd; it is a mild, soft Substance, and lenient to them; so that the Accidents appear not till that begins to corrupt between them, and with it the Membranes themselves putrify: Upon which there follow Convulsions, Howlings, and a Dispatch of the Patient.

tient. From which very Observation may be seen the Folly of dressing these Wounds with powerful Desiccatives, which, so far as I could observe, did always hurt the Membranes, but never either digest or incarn the Brain. For, according to *Hippocrates*, *non coalescet*; but, as it gets Liberty, works itself forth not unlike unto Barm. At Sea, those wounded into the Brain die soon after; we having no Conveniency of lodging them, or dressing them, so warm as they require. In the Wars, my Employment did not permit me to see the finishing of the Cures; and here, in my Practice in and about the City, I never was call'd unto any so wounded, where there were any Hopes of Cure; therefore must leave that to others to treat of. But by what I have seen of them heretofore, their Cure consists, as I have already said, in dressing them as the Wounds of the *Dura Mater*, and in keeping the Brain within its Membranes; without which no Incarnation can be made on the Membranes.





A
T R E A T I S E
O F
Gun-Shot W O U N D S.

The S I X T H B O O K.

C H A P . I.

Of Gun-Shot W O U N D S in general.

Gun-Shot
Wounds
whether
fiery or ve-
nous.



REAT hath been the Contention amongst the Learned about Fire and Venom in Gun-Shot Wounds; some maintaining the one to be in them, some the other; and others holding that there is neither. That which I suppose might be the Occasion of their suspecting a burning and a poisonous Quality, was the deadly Colour of these Wounds, which in those early Days, when the Invention of Guns was novel, surpriz'd

priz'd them, they looking not unlike poison'd and burnt Wounds. Where the Bullet pierceth, it extinguisheth the natural Heat, and the Lips of the Wound are livid or blackish ; and if they be not dress'd rationally, they inflame, and are accompanied with Tumour, and Blisters frequently rise about them, also the Matter is of a foetid Smell. In this Condition the Wound is commonly the first Day, and so to the Seventh ; and, if not succour'd, it gangrenes, and so the Patient commonly dies. If in those Days the Learned were thus deceiv'd by their Aspe&t, and dress'd them as venomous Wounds ; it can be no marvel that they should write so of them ; I verily believing, that in their way of Treating them they were directly as poison'd Wounds, difficult to digest and cure.

In these our later Times, although they do not call *Errors* in them venomous, yet is it a difficult Thing to dissuade many of our Chirurgeons from dressing these Wounds with Tinctures of Myrrh and Honey of Roses, and thrusting in of great Tents : By which way of Dressing I have seen these Wounds undigested the tenth Day ; one whereof was in the Cheek, with dry and flaggy Lips. These lesser fleshy Wounds being undigested, at last gangrene : and in Truth it is not to be wonder'd at. I will undertake to shew you the Experiment every Day, and that in a Fontanel or Issue made by a Caustick. Cut you through this livid or black Escar, and put in a Pea in the Middle of it, with Tincture of Myrrh and Honey of Roses, as I have seen some of them dress Gun-Shot Wounds, and the next two or three Days after, when you dress it again, it will be to your Sight not unlike a Gun-Shot Wound : Continue your Dressing with a Pea, and with your Tincture of Myrrh ; and if it do not gangrene, yet it will be inflam'd, and slow in Digestion. And this is from the improper Application in the dressing it. For if you dress'd this Eschar in the Fontanel with Emollients and Digestives, as you ought to do, the Escar would separate with Digestion in the worst Habit of Body : and so it will in Gun-Shot Wounds with little Distemper or Difficulty, if you have timely extracted the extraneous Bodies. But the Ignorance in some, and the Discontinuance of others, in this Kind of Chirurgery, hath occasion'd these Errors.

Observati-
on.

Thus at our entering into Worcester, when the King came out of Scotland, with an Army of that valiant People, a Townsman was shot. The Pistol being fired by the Cheek, shot him through his lower Jaw and Tongue, and out at the contrary Cheek. The Chirurgeon of the Town, upon Sight of it, concluded it gangren'd from the black Colour, and declin'd the Dressing it the Way he rationally ought: Upon which the Part grew exceeding painful, swell'd and inflam'd; it also gleeted much. After two Days I was consulted, and by lenient Medicaments, and good Bandage keeping up the fractur'd Jaw, I asswag'd the Pain, and digested the Wound, leaving it in the same Chirurgeon's Hands, who cured it. In this Person the Wound was burnt by the Flame, the very Powder sticking in some Parts of his Cheek. This, with the Putrefaction, occasion'd by the hot Weather, and the improper Applications, contributed to our Brother Chirurgeon's Apprehension. It is this ugly Aspect that puts the inconsiderate Chirurgeon out of his Method, and so renders Gun-Shot more difficult of Cure than otherwise it would be. For if such Wounds were rationally dress'd, they would digest and heal as easily as any complicated Wound. What I have said of Gun-Shot, happeneth at Sea frequently by Splinter, which, though it may have lost its Force to make a Wound, yet it sometimes bruiseth the Skin to the Flesh so forcibly as to extinguish the natural Heat, and to make it black: If this be dress'd as a Gangrene with *spir. vini* and *unguent. Egyptiac.* or lapp'd up with a warm Stupe, the Escar will grow dry and parch'd, and the Humours which flow plentifully to it, will cause an Inflammation with Tumour, and an Apostemation is the best that can be expected underneath the Escar, and consequently it will terminate in a hollow Ulcer; but for the most Part it corrupts and gangrenes. Whereas if this contused Escar were dress'd with Lenients, according to that Aphorism of Hippocrates, *Omne quod contusum,* &c. and the Parts about embrocated with *ol. ros cum album. ovor. & aceto,* and a Defensative applied over all to prevent Defluxion, the Escar would separate as easily as those made in Fontanelles by Caustick, and afterward incarn and cicatrize with much Ease to the Patient.

Many Instances I could give of this Kind, but shall make Choice of one that will give least Offence, and that in the Out-side of the Leg. It was somewhat broader than a Five Shilling Piece in Silver. How it had been dressed on Shipboard I will not insist; but on the Shoar I saw it black, and the Pretender to Chirurgery had dressed it with *spir. vini & unguent. Ægyptiac. &c.* till it was as hard as Shoe-Leather, and the circumjacent Parts inflamed and swelled. I did not perceive he had ever cut into the Escar: If he had, it was superficially done. I advised it to be presently divided, and to be dressed warm with *unguent. basilic. cum ol. lilio.* But he replied, he knew how to dress a Gangrene. It was no easy Task to persuade him out of this Method: But I prevailed, and thereby the Matter was discharged, and the Patient more easy, and sooner cured.



C H A P. II.

*Of the Cure of Gun-shot Wounds; and first
of Extraction of Bullets, &c.*

Wounds made by Gun-shot are the most complicate Sort of Wounds that can be inflicted: For they are not only Solution of Continuity, but have joined with them Contusion, Attrition, and Dilaceration, in a high and vehement Kind. To this we add all Sorts of Fractures and Accidents, as *Hæmorrhagia*, Inflammation, *Erysipelas*, Gangrene, and *Sphacelus*; besides the extraneous Bodies which are violently carried into the Wound, and multiply Indications. The Number of the Indications in compound Affections must answer to the Variety of Disturbances. Were it a simple Wound, the Cure of it would presently be performed (as you have read in the preceding Treatise of Simple Wounds) *per astringentia & exsiccantia*, by such Medicaments as are of an astringent and drying Quality. The Cure of a Wound is the Exsiccation of it. But here is always joined with these

Compound Intentions.

these that which indicateth the Use of *emollentia & suppurantia*; according to that of *Hippocrates*; *Omne quod contusum, necesse est at putrefacat, & in pus vertatur*: What is contused must necessarily purify, and be turned into Matter.

What is torn to be reduced to the Part, or cut off. That which is fretted and torn must also be reduced to the whole, or cut off, before your ordinary Intention of Incarning. Moreover, in these Wounds, not only the Bullet itself is ordinarily lodged, but many times other strange Bodies are carried along with it; for Extraction of which, judicious Care and Industry are required in you. In these recent Wounds we very rarely have a Flux of Blood: Though the Veins and Arteries be wounded, they commonly lie quash'd in the contused Flesh, until Separation of the Escar; and about that time, when you least think on it, they may burst out violently. I have seen them thus often break forth. But if such Vessels do bleed upon the Receit of the Wound, and interrupt you in drawing out the extraneous Bodies, you must endeavour to suppress the Bleeding, for thereupon depends the Life of your Patient: But withal so proceed, that you may extract the Bullet first; and then be careful, that in the restraining the Bleeding, you bring not on a Mortification by your crowding in Dossils. Too many Instances may be given hereof: Therefore I rather advise you to use an actual Cautery.

Observat. A great *Hæmorrhage* happening to a Soldier at the Surprize of *Weymouth* by the Garison of *Portland*, by a Shot through the Heel, I endeavoured the stopping the Blood by Astringents, Bandage, &c. But after all, I was put to the Use of the actual Cautery; which I did apply successfully, and have since seen *Botallus's* Authority for it. *Tutius enim est* (saith he) *eam ignito ferro constringere*. These Wounds are also accompanied with *Anodynæ*. Pain, which ought to be appeased by Anodynes. But you must be well advised in the Application, lest you extinguish that small Remainder of Heat that is left. How you shall deal with all these Inconveniencies, and not add one Evil to another, I shall plainly deliver to you. And first, what must be first put in Execution; which is, the Extraction of Bullets and other extraneous Bodies.

The Part is at first Dressing to be cleared with what Diligence you can of all such foreign Bodies as have made violent Intrusion into it, while the Patient is warm with the Heat of Battle, and the Wound fresh, and very little altered by either Air or Accidents: Upon which Consideration less Pain must necessarily follow upon the Extraction.

In the *Armado Naval of Dunkirk*, where the Chirurgeons were oft employed in this Kind of Work, we after every Fight went together visiting one anothers wounded Men. It was thought amongst us a great Shame, if any Thing of this Work of Extraction were then to be done: For after the first and second Day, the Wound proveth tumified, also the neighbouring Parts are inflamed, and so changed in their Temper, that they conceal from your Sight both the Bullet and his Companions, so that the Place they are couch'd in can hardly be known; or, being discovered, you cannot without Hazard of your Patient, or great Trouble of the Part, make Extraction of them. In which Case it may then be reasonable to defer that Work, and by Leniency to hasten Digestion.

Yet if the Wound be near a Joint, or the Shot lodged amongst the Tendons, 'tis much to be feared the Pain will not cease, and consequently the Wound will not digest. In which Case the Omission of drawing out the Bullet may bring a Mortification. It hath been the Cause of the Death of many a brave Soldier, and is the Ground of all the Mischiefs these Wounds are subject to as Pain, Inflammation, Spasm, Convulsion, Gangrene *Sphacelus*; what not? Every Battle producing Instances of it, to the Discredit of our Profession. Therefore to prevent the Increase of such Accidents, neglect not to make Extraction of it one Way or other.

But if the Bullet be lodged in a less noble Part, as in the Musculous Flesh, you may with more Safety content yourself until the Seventh Day, or till the Fierceness of the Accidents be over, and the Wound digested. But withal it will require more Care, for the Wound will be more painful, and slow in Digestion, than otherwise it would be. Yet by the Confession of those that allow Fire and Poison in it, the Bullet may lie long there, and do little Harm. Nay, I suppose there are not many

have heard of, or seen Bullets, that, without Grievance to the Patient, have continued lying long in the Fleshy Parts of wounded Men. Conceive this spoken of Leaden Bullets; for Iron or Brass cannot (by reason of their Aptness to rust) remain without doing Harm. However, let nothing of this encourage you; for the Bullet pierceth not any Part without carrying Rags along with it, which corrupt in the Wound, and make Apostemations, occasioning a prolonging the Cure, as must needs be observed by all Men in their Practice.

Observat. The Servant of a Nobleman was wounded and shot in the Thigh by Highway-Men. The Bullet not having been extracted by his Country Chirurgeon at the first Dressing, could not be drawn out by me at the second, but occasioned great Pain and Inflammation, burning Heat and Watchings. And altho' he had many other considerable Wounds upon him to make a Derivation, yet was his Gun-shot more vexatious than all the rest, until I extracted the Bullet, and Rags carried in with it: Yet this was but a Pistol-Bullet. But after I had drawn it out, my Digestion became good: And by equal Bandage, with gentle Compression of the Parts, I united and healed it in ten or twelve Days, which I doubt would not have been cured in three Months.

Nay, while any of the Rags remain in the Wound, it will never cure: But the extraneous Bodies drawn out, there is little Difficulty in the healing these simple Wounds, if dress'd rationally.

Observat. An Instance whereof I shall give you in a poor Soldier, who was shot at the Castle of *Dunbar*, with a Musket-Bullet, a little above the Left Clavicle, in amongst the Muscles of that *Scapula*. The Bullet was drawn out by one of my Servants, and the Wound dress'd up with Digestives. But some Days after, he being brought to *St. Johnston's*, I found it inflamed and very much swelled. We dressed it up according to the Method set down in this Treatise: But it apostemated, and mattered very much. After several unsuccessful Applications, I made an Incision by the Side of the *Scapula* into the Cavity, and pulled out the Rags that had been carried in by the Shot: And from that Time all Accidents ceased, and the Wound cured soon after. But if such be handled, as some

some have lately taught, they are as so many poisoned Gun-shot Wounds.

Now for the taking out of the Bullets, and other extraneous Bodies, there are two Methods: First, one to extract them by the Way they went in; the other, to open the Way by which they would, if their Force had not failed them, have passed themselves through.

For to take them out the Way they were forced in, you must place the Patient, as near as may be guessed, in the Posture he was in when shot: And if, by reason of his Weakness, or other Infirmitie, he cannot without Prejudice be so situated, let him be laid in a Position which may as nearly answer it as may be, lest some Part of a Muscle, Tendon, or Ligament, obscure what you desire to make manifest: Then make a Search for them with your Finger or Probe. The Figure of these Wounds is always round: The Bullet forces the Flesh in with it, and the Place by which it enters presently contracts closer; but its going out is more lax. You may guess, by view of the Wound, the Largeness of the Bullet: and comparing the one with the other, make Choice of a fit Instrument for Extraction, wherewith you ought always to be well furnished. Your main Care in this Work must be to find out the Bullet: But if you fail of it, by searching into the Wound with your Probe, then try if you can feel it by handling the Parts about; it being wonderful to consider how these Shots do twirl about, at least seem to do so, when the Posture is changed in which the Wound was received.

As for Example: A Man hath been shot in the Cheek, and I have cut out the Bullet behind in his Neck. Another was shot in the Out-side of the Small of one of his Legs; the whole Member extremely swelled and inflamed; no Possibility of finding out the Bullet either Way: At last, by Chance, I felt it in the Inside of the Thigh above the Knee. And so another being wounded in the Out-side of the Arm, I have cut out the Bullet below the Scapula. If the Bullet hath not lain in so long (as in some of these Cases) that the Parts are extremely pained with Inflammation and Tumour, the Pain where the Bullet lodges doth sometimes help to discover it.

A com-

Observat. A common Soldier, shot in the Breast through the *Sternon*, lay roaring very grievously, complaining of a Pain in his Back. I was fetch'd to him, and turning him on his Side, I saw the Bullet lie like a small Wen or *Scrophula*, thrusting out under the Skin not far from the Spine. I made Incision over it, according to the Length of the Part, and thrust out the Bullet as easily as I could desire. Then I dressed it with Digestives, the Soldier ceased his Crying, and acknowledged before us his Pain was from the Bullet in the Skin. For indeed the Lungs, and other internal Parts, are seldom so sensible of Pain, though wounded through.

Observat. An Instance whereof I saw in one run through them with a Rapier. He complained of no other Pain than that external one in his Back, where the Sword passed out. Some time after this being cured, he died of another Disease. I opened him, and saw his Lungs sound, and that the Pain of his Back proceeded from the Edge of the Rib, which had been cut by the Sword's passing out. The Lungs discover their Hurt by other Symptoms. The common Soldier died, as most do that are shot thro' the Lungs.

If in your searching for the Bullet you light on the Part, tho' there be no Extuberance or ought to be felt, yet his Pain there will be a good Sign of it. If no Accidents occasioned that Pain, make your Way there by Incision, avoiding the Vessels, and take out the Shot, and what else offers itself. By this you do both quit the Part of its troublesome Lodger, and withal make Way commodiously for Discharge of Matter; which, in regard most of these Wounds are sinuous, (the Bullet turning aside when it is hindered in its Journey forward,) for want of Discharge, might in those Places occasion Fistula's and hollow Ulcers, not without ill Quality.

Observat. So a Man being shot with a Slug near the external *Canthus* of the Right Eye, thro' that Bone, it seemed to the Chirurgeon that dress'd it, to have passed directly forwards, and accordingly be crowded in a Tent, and daily increased the Bulk, to stop the Bleeding it was subject to. But the Bleeding continuing, I was fetch'd, and saw him pull out a Tent above an Inch and an Half long. I cast in some of the Royal Styptic-Water, and stopp'd

stopp'd the Flux of Blood. His Cheek was very much swelled, and had apostemated on that Side of his Neck, and discharged its Matter two Inches lower than the Tumour. I cut afterwards into that Tumour, and felt the Slug: It lay partly under the *Os jugale* or Cheek-bone. It was a Wonder to me how it came there; but I drew it out: And from that time, his Wound above and the Apostemations below cured.

In the Work of Extraction, take great Care you lay *Cantiv.* not hold of some Nerve or Tendon, and so pluck them along with the Bullet: For by so doing you will cause intolerable Pain and grievous Accidents. You must therefore neither open nor dilate your Instrument, until you take hold of the Bullet without any of the circumjacent Parts.



C H A P. III.

Of Dressing Gun-shot Wounds after Extraction.

AS soon as you have made a Separation of these extra- *First dress-*
neous Bodies, if you judge the Wound to be so well *sing after*
conditioned, that there is neither Putrefaction, nor any *Extraction*
thing tending that Way, (as in recent Wounds there is
not) be not discouraged at whatsoever evil Aspect it then
hath, but consider its livid Colour (as I have said) to be
usual in these Wounds, where the Contusion is not only
simple in the Skin, but thro' Flesh and all, as far as the
Bullet or Splinter went, extinguishing the natural Heat:
So no Wonder if it hath the Colour of a gangrened or
poisoned Wound. Therefore be not disturbed in your
Thoughts, but, having taken out the Bullet, or Pieces of
Splinters, dress it up as a contused Wound, with *Oleum*
Catellor. or such as followeth, as hot as the Part will
bear, not giving Credit to any that shall persuade you to
the contrary, no, though it be near a Bone; for the
Gleer

Gleet will foul it more than your greazy Medicaments; therefore dress it with some of these: Rx ol. lilior. alb. tibj. boil in this two new-welpt Puppies until the Flesh fall from the Bones, then add *lumbric. terreſt. in vino lotor.* tibj. boil these a While, then strain them by a gentle Compression: To the strained Liquor add *terebinth.* ʒij. *spir. vini* ʒj. reserve this for your Use. Or this: Rx ol. lini, cannabin. an. ʒiiij. ol. lilior. chamæmel. an ʒij. terebinth. ʒj. Mist. Or this: Rx terebinth. opt. ʒiv. shuris, mastich. an. ʒiiij. myrrhæ ʒj. ol. Aparici ʒij. ol. iunbric. & sambuc. an. ʒiiij. Mist. S. A. ~~Rx~~ Rx ol. olivar. tibj. terebinth. tbs. gum. elemi. ʒij. æruginis pulv. ʒij. Or this: Rx spir. vini. tbs. terebinth. tibj. ol. hyperici & lini an. tbs. sang. dracon. subtil. pulv. ʒj. Mist. S. A.

Observat. With this latter I cured a Servant of *A.D.* shot into his Hand. This digested the Wound; and after the Slough began to separate, I felt Part of a Bone bare, which I dress'd with *extract. scord.* dissolved in *mel. ros.* with which I deterged; and feeling the Bone afterward incarned, I also incarned the Wound, and cicatriz'd it with *unguent. tutiæ, &c.* and in few Days cured it without any Difficulty. *Liniment. Arcei* with any of the above-mentioned Oils is very good, adding a few Drops of *ol. terebinth.* which by its Subtilty penetrates, and by its Heat rouzeth the natural Heat in those cold Parts, and putteth them upon Digestion and Separation.

Quercetan commends this: Rx succorum tuffilag. oxa-lidis, an ʒij. caricas ping. num. xx. thur. ʒij. resin. laric. ʒijs. axung. gall. anser. an. ʒij. butyri recent. tbs. ol. visci pomorum comp. tbj; put these together into a Vessel close stopt, boil them on a moderate Fire the Space of six Hours, then strain them out hot, and evaporate them to a good Consistence. This following is another of his; Rx ceræ novæ, resin. picis naval. an. ʒiv. sevi hircin. medullæ cruris vitulini, an. ʒij. æsypis ʒj. ol. oliv. aut lini tbj. liquefactis omnibus & transcolatis fiat Unguentum, quod reservetur ad usum. He adds ʒj. of Precipitate to every ʒ of this. But in recent Wounds, this will not be necessary: For you will find by Experience, that these Wounds will digest and suppurate without it, (and that frees them from Putrefaction) nor will it be always for your Credit, if you consider the Quantity of

Bal-

Balsams we use in such Wounds, and what Prejudice some People may receive, either by its salivating them, or otherwise affecting their Spirits. Yet Precipitate and *Axungia*, with a few Drops of *ol. terebinth.* was a common Médicament amongst us: But I refer that to you, it being a good Remedy to resist Putrefaction, and hasten Separation of the Escars. You ought to dress up these Wounds lightly with a proportionable soft Tent, and Pledgits dipt in some of these Digestives very warm, but not to scald them. After that, embrocate the Parts about with such like: Rx *ol. lumbric.* *ros. myrt.* *an.* 3ij. *aceti cachl.* ij mix them. In the Dressing, your Applications over the Wound and Parts circumjacent, shduld be such as have a Virtue to hinder the Flux of Humours, and strengthen the Parts: To which Purpose, Rx *far. bord.* & *fabar.* *an.* 3vj. *ros. rubr. bacc. myrt.* *an.* 3jss. *sem. cydon.* 3vj. boil these in *posca*, to the Consistence of a Cataplasm, adding at last two new-laid Eggs, with *oxymel* 3jss. If you apprehend this too heavy, you may add *ol. myrtill.* & *ros.* with Wax as much as is necessary, and make it into the Form of a Cerote. Above the Wound lay one of the following Defensitives, which you may have always ready by you: Rx *bol. Armen.* 3iv. *terræ sigill.* 3ij. *sang. dracon.* 3jss. *corn. cerv. ust.* or burnt Bones 3jss. or Juice of Sloes dried 3ij *ol. ros.* & *myrtill.* *an.* 3vj. *aceti* 3xij. boil these to the Consistence of a Cerote, addendo in fine decoct. *alb. ovor.* iv. Or this: Rx *pulv. ros. rubr. myrt.* 3j. *bol. Armen. terr. sigill.* *an.* 3vj. *succ. plantag. solani, an* 3ij. *aceti opt.* 3iv. *ol. ros.* & *myrt.* *an.* 3vj. *ceræ q s. Misc.* Apply your Compress dipt in *aceto* or *Oxycrate*: Let your Bandage be put on equally and gently, to retain your Dressings, and hinder the Influx of Humours.

Having thus dress'd the Patient, presently consider of *Bleeding.* letting him Blood, to prevent ill Accidents, and especially if he lost little or no Blood from the Wound, or if there be a *Plethora* joined with it. In which Case Revulsion made from the same Side is commended by *Galen.* *Revulsio enim quæ e directo fit celerrimam utilitatem ad fert: Galen. de Sang. missione.*

A Clyster should precede Phlebotomy. It may be *Clysters.* made of the common Decoctions: Or of Mallows, Violets, Beets, *Mercury*, Bay and Juniper Berries, with

Of Dressing after Extraction. Book VI.

Oil of Linseed, Honey of Roses, *hiera picra*, *Elect. lenitiv.* &c. But if you have not these in Readiness, make your Clyster with the Broth of Flesh, *ol. chamæmel.* Sugar, and the Yolk of an Egg, with a little Salt, if your Broth be not salt, or, in case of Necessity, Salt-Water; or Broth out of the Kettle, with a few Flowers of Camomil boiled in it, and strained, adding a little Butter, or Oil, and red Sugar. Any such like may serve for a good Clyster.

Epithe-mata.

It will also be requisite you be furnished with some Cordials, to resist the putrid Vapours, and refresh the Spirits; which you may do externally by some *Epithe-mata* of distilled Waters, as of Balm, Bugloss, Roses, *acetum*, with the Powder of the Roots of *Tomentill.* *scordium*, *scorzoneræ*, *contrayerva*, or other Cordial Species, of which you have Variety in the *Pharmacopœia Londinensis*, which may be for your Purpose. This following may serve you for an Example: Rx *aq. melissæ*, *borrag.* *bugloss.* *an.* $\frac{3}{ij}$. *aceti rosati* $\frac{3}{j}$. *speciei diarrhod.* $\frac{3}{j}$. *croci* $\frac{3}{j}$. *Misc. fiat Epithema.*

Cordials.

And with some of the aforesaid Waters you may make Cordials also, by adding Syrup of Citrons, Gilliflowers, and *confect.* *Alkermes.* For Instance, Rx *aq. bugloss.* *cinnamon,* *an.* $\frac{3}{ij}$. *confect.* *Alkermes* $\frac{3}{j}$. *lap.* *bezoar.* *occid.* $\frac{3}{ls}$. *syr.* *e succ.* *citr.* *cochl.* *ij.* *Misc.* For the common Soldier $\frac{3}{j}$. of *London Treacle* or *Mithridate* dissolved in Wine may serve. As to their Manner of Diet, in great Wounds it is necessary to observe a spare one, as Barley-Gruels, Panadoes, thin Broth, or a Potched Egg, this much availing to the preventing of Inflammation. But in this the Patient's Custom must be considered. Also the Air ought to be temperate, for Cold is an Enemy to Wounds. Rest is likewise required, as well to the Mind as the Body. Therefore, having dressed him, lay him to rest with $\frac{3}{vj}$. *syr. de meconio cum cochl.* *ij.* *aq. cardiacæ* in $\frac{3}{ij}$. *aq. pa-paver.*

The second Day's Dres-sing.

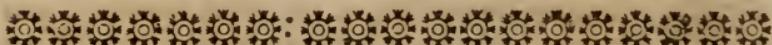
We shall now proceed to the second Day's Work, and therein consider the Habit of Body, and more particularly what concerns the Wound. In these Gun-Shot Wounds it may be convenient the Body be gently purged by Lenients, as is formerly said. *Purgatio enim per alvum plerisque vulneribus prodest.* Purging avails much for

for the carrying off bilious and serous Humours, which from their Heat and Tenacity, are most apt to ferment and flow into these Wounds, and cause Pain, Inflammation, and other ill Symptoms. In which Cases, *cassia*, *manna*, *tamarind*. *syr. de cichor. cum. rhabarb. ros. solut.* are prescribed, and may be taken in Whey or Ptisans.

But as for stronger Purgatives, *Hippocrates* saith well, *Purging. Coela sunt purganda, non cruda*: Which is more especially true, when you speak of Scammoniate Medicines.

Having thus proposed a general Way of Purging, we shall again consider what is requisite for dressing the Wound, and prepare our Dressings, and apply such Medicaments as may be necessary. In order to which you ought to have a Fomentation ready, whereout may be wrung a hot Stupe. To which Purpose, *R. summitat. hyperici, centaur. scordii, absinth. an. Mj. flor. ros. rubr. Fomenta- chamaemel. melilot. sambuci, an. Mjs. furfuris Pj. coq. in tion. aq. font. ad lbs. colat. adde vini austeri lbj. spir. vini 3vj. fiat Fatus.* These will give a Breathing to the Parts, and defend the Wound from the Air, while you consider it. If all be well, continue the Use of Digestives: But if it be accompanied with very great Pain, you may foment with this: *R. decoct. rad. althææ, malv. fol. verbasc. chamaemel. melilot. sem. lini, fœnugræc. boiled in Sheeps-Head Broth, or other: And of the Fæces of this Fomentation you may make a Cataplasm, adding farin. hord. lbs. sem. lini, cydonior. pulv. an. 3j. unguent. basil. & unguent. dialthææ an. 3js. axung. porcinaæ vet. q. s. croci 3j. in fine coctionis addend. ovor. integr. recent. num. iv.* Apply it over all, or the former Cataplasm. It cherishes the Heat of the Part, furthers Suppuration, and is Anodyne. You are to make the Bandage as before, and continue this Way of Dressing to the Seventh or Ninth Day, until you have separated the Sloughs, digested the Wound, and have a laudable Pus, (as you are wont to call it) which is *album, æquale, leve, & minime foetidum*, a perfect white Matter, of good Consistence, and not foetid or ill scented. If the Matter be defective in any of the said Qualities, *Præcipitate* will be of good Use mixt with the latter Unguent of *Quarctan's*, or that mixt with Unguent.

Apostolor. or this following Unguent may be applied alone, or with *Præcipitate*: Rx succ. agrimon. centaur. min. plantag. apii, an, ʒj. mucilag. bord. ʒiv. boil these together, adding terebinth. *Venet.* ʒij. mell. com. ʒij. far. bord, cibrat. ʒij. croci pulv. Əj. fiat *Mundificatum.* To this you may add, Aloes, Myrrh. sarcocol. rad. aristoloch. gentian. ireos, for the incarning these Wounds. If you desire rather Injection, the same Ingredients may serve. But in the Use of Injections, be sure you do not stop the Orifice to keep the Liquor in; for so you shall distend the Ulcer, and make it more Sinuous.



C H A P. IV.

Of Accidents befalling Gun-Shot Wounds, and of Sinuous Ulcers.

BUT from the First to the Eleventh Day, many Accidents are wont to happen to these Wounds, which not only impede the Cure, but often, without timely Help, destroy the Patient. And these are vehement Pain, Inflammation, *Erysipelas*, from whence Gangrenes and *Sphaceli* do frequently happen. These latter take their Beginning from Inflammation. Therefore I have elsewhere particularly treated of Inflammation and *Erysipelas*, that you, seeing what it is, may in its Beginning prevent its Increase. It commonly proceedeth in this Case, either from a very ill Habit of Body, or from the ill handling of these Wounds in the Beginning.

The Remedy is, timely to prevent the Influx of Humours, and evacuate that which already affecteth the Wound. The first Way is, by Bleeding and Purging; both which are directed you in the first Day's Work. If you omitted that then, you must perform it now.

The

Inflammation.

The second Way is, by external Applications. If Pain be the Cause, you must succour it by Anodynes, which may mitigate and repress the Heat of the Part: of which you may have your Choice in the Chapters of *Phlegmon* and *Erysipelas* in general; and in the first Chapter of the Treatise of Wounds, where we have particularly treated of Pains, and proposed their Relief, &c. viz. in their Beginning with Refrigerants and Repellents, and in their State, by moderate Caletaction and Discutients, and afterwards by Concoction of the Matter; to which Treatise I refer you.

The next and most cruel Symptom is Mortification of *Gangrene*. the Part, which very often attends great Inflammations; and is shrewdly to be suspected, when they yield not readily to Discutients or Suppuratives. In these Wounds, it happens most commonly thro' a Suffocation of the natural Heat of the Part, by reason of the great Concourse of Humours, or too refrigerating and repellent Applications in the Time of great Inflammations, which have enfeebled and hindred the *Transitus* of Spirits into the Part. It may be perceived by the Gleet and Change of Colour, it beginning to look livid; also by a Diminution of the Tumour, &c.

When you see such a Change begin, you must presently prepare to withstand a Mortification by Scarification, not only until the Blood come about the Lips of the Wound, but deep into it thro' the Escar to the Quick, and suffer it to bleed freely, and make the Part sensibly feel, that by such Means you may disburthen it of Part of what would have choak'd it, and make way for the Entrance of the Operation of the Medicine. Then foment the Part with a good *Lixivium* made of Ashes, to which may be added Salt and Vinegar: Or you may boil *scord.* *absinth.* *centaur.* and such like, in the aforesaid *Lixivium*. After you have well fomented the Place, wash the Scarifications, and dress the Wound with *Egyptiac.* *cum theriac.* *Venet.* dissolved in *aceto vini*, adding calcin'd Vitriol, &c. then apply a Cataplasm *ex farin.* *bord.* *fabar.* *orobi,* *lupinor.* decocted in some of the same *Lixivium*, with an Addition of Oxymel to it. But as to this Matter, I refer you to the particular Chapter of *Gangrene* and *Sphaceli*, for farther Directions therein. The Gangrene stopp'd, hasten Separation

of the Escars by Digestives, and then deterge with *mundiſ. ex apio & Paracels.* &c. and so proceed with Sar-
coticks and Epuloticks, to finish the Cure.

Hæmor-
rhagia.

Observat.

But in the separating of contused Parts, as I have often told you, great Fluxes of Blood usually burst out upon us. Thus in a Patient of mine, wounded by a Shot thro' the Inside of the *Radius*; upon Separation of the Escar, a great Flux of Blood happened. While I was stopping the first Orifice which was nearest the Artery, the Blood burst forth of the other. Hereupon I stopp'd both the Orifices with some astringent Powders, (I suppose that of *Galen's* Prescription of Aloes and Hares Furr, I most frequently using those as the best in such Cases) rowling up the Wound with a good Compress dipt in a Stiptick Decoction, laying my common Defensative over all, and did not open it till 3 or 4 Days after. How such Fluxes of Blood are further to be treated, you may see in the Chapter of an *Aneu-
risma*.

*See Trea-
tise of
Wounds.*

*Sinuous
Ulcers.*

Gun-Shot Wounds, after Separation of the Escar, are apt to become Sinuous Ulcers, especially after great Fluxion, and where Bandage cannot be used to preserve the Tone of the Parts, as in the upper Part of the Thigh and Hip, &c. These Cavities causing much Pain to the Patient, and Difficulty and Trouble to the Chirurgeon, we shall consider their Cure, taking our Indication from the Parts affected, with the Largeness of the Wound, Contusion and Laceration of Parts: For from such Wounds there must necessarily be Loss of Substance, and the Quantity or evil Quality of the Matter must needs render it sinuous, especially where Bandage cannot be conveniently made to thrust out the Matter.

And if the Bullet, or any extraneous Body be yet remaining within, and the Parts extremely tumified and troubled with Pain and Influx of Humours, the included Body will be the more streightned in its Passage out, and render the Cure to much the more difficult. And if a *Cacochymia* or *Lues Ven.* be joined with it, you will scarce cure your Patient without exhibiting Antivenereal and Scorbutick Remedies.

Therefore,

Therefore, to prevent Sinuosities, you are to enlarge the Orifice at first, and keep it so wide open, that the Matter which is daily there ingendred may have free Passage out: Which, if it may not by the Way the Shot went in, then you must consider how in another Place the *Sinus* may discharge itself. This being prudently effected, and the Matter thereby discharged, you shall then more easily perfect your Cure.

But before you make this Apertio, you must consider, whether by altering the Position of the Part, or by Compression with Bandage, or by hollow Tents, the Matter may not be brought out. And to make the Cure of these Cavities the more facil, you must endeavour to place the Member in such a Figure, that the Orifice may be depending. Also you must endeavour, by Stupes, Sponges, Compress and good Bandage, to press out the Matter, that the Cavities may unite. They should be wrung out of Red Wine, wherein have been infused *flor. ros. rubr. myrtill. cort. granat. balaust. nuc. cupress. sumach, acacia*; and if the Matter do not well discharge between Dressings, you must dress it the oftner. Also Injections may be made with a Decoction of some of these following, *myrrh, aloes, sarcocoll. rad. iridos, aristoloch. spir. vini, mel. ros. aq. calcis, alum.* and such like, to dispose the Sinuosities to heal.

Sometimes in a Wound inflicted on the upper Part of a Member, the Matter not being likely to discharge itself thereout, I have, by a Seton Needle, perforated it thro'; and retaining the twisted Silk in the Ulcer, till the lower Orifice was digested, then drawing out the Silk, I kept it open by a Tent a few Days, till the upper Part agglutinated; and afterward, as the Matter lessened in the depending Orifice, I left off the Use of the Tent, and healed it up.

SO in a Gun-Shot Wound on the Inside of the Thigh, 1. *Observation of a* passing under that *Inguen* slanting up to the *Os ilion*, *wounded* and apostemating in the upper Parts, it not yielding to *cure by Injections, Bandage, &c.* I made a *Cannula, Thigh.* thro' which I passed a Needle with a twisted Silk, and kept in the Silk as a Seton, till I had, by Gentian Roots, dilated the Orifice sufficiently for the Discharge of Mat-

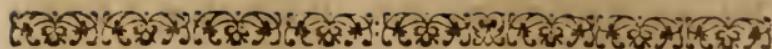
ter. To make the Perforation of the Needle more certain and easy, I applied a Caustick first upon the Place, the better to feel the End of the *Cannula*. By this Apertio the Matter discharged itself in what Position soever he lay, and he was thereby happily cured.

2. Observat or of a Shot in the Face.

One was shot in the Face betwixt the Nose and Eye, on the Right-side into the *Ethmoides* by a Pistol-Bullet. After he had been cured some Years of the external Wound in his Face, he became troubled with a fretting *Ichor*, which discharged by that Nostril; and especially at his first rising in the Morning out of Bed, it would run half a Spoonful of a yellowish Colour, which had made a Chop or Gutter at the lower End of that Nostril by its Acrimony. After some Years, he felt, upon bending his Head backward or forwards, the Bullet to rowl to and fro over the Roof of his Mouth. He complained to me of his Grievance at the *Hague* in *Holland*, a little before his Majesty's going into *Scotland*. I offered to his Consideration the casting in Injections, or passing a Probe into that Nostril downwards, to try if either Way it might be wash'd or thrust downwards in the Gullet, or be excreted into his Mouth. But these Ways had heretofore proved ineffectual. We therefore resolved upon the cutting thro' the Palate-Bone. To which Purpose I placed him in a clear Light, one holding his Head steady, while I cut into the Roof. But the Flesh was so close tied to the Bone, that it would not yield to my *Spatula* as I expected: Wherefore I applied a Bit of a Caustick-Stone, and held it to the Place with a Pledgit of Lint a few Minutes; by which I consumed the soft fleshy Part over the Bone, and afterwards cut into the Bone such a Hole, that in the moving of his Head I could see the Bullet lodged in the Hole; which encouraging us to proceed in our Work, the Bullet was afterwards taken out, and he eas'd of that Ditcharge of Matter which threatned a filthy carious Ulcer. My Attendance upon his Majesty into *Scotland* hindering my Prosecution of that Cure, I left him in the Hands of a Chirurgeon there, and since have often seen him at Court. But the Ulcer did not close up with a *Callus*; however, the Place is supplied by a small Plate without Offence.

If the *Sinus* run transverse the Veins, Arteries, Nerves, Tendons, &c. you may then (if you think it not safe to pass a Needle in a *Cannula* through it, or if you cannot do it by reason of the Make of the Part, you may then, I say) make use of that Instrument described in the Treatise of *Fistulæ* and Sinuous Ulcers in *Ano*, by which you may cut as assuredly upon the End of the Director which passeth within the *Sinus*, as if you saw it before you. It is commonly used where the End of the *Sinus* lieth most distant from the Skin. After which Apertio it must be kept open by a Tent, for the Discharge of Matter, till it be well digested, and fit to cure. If the Orifice be small, and the *Sinus* lie but under the Skin, and in such a Place as may be safely opened, it may be dilated with prepared Sponge or Gentian Roots, and afterwards snipt open by a Pair of Probe Scissars, or cut by a Knife upon the Director within, or laid open by Caustick. And after you have divided the *Sinus*, you may digest it with *terebinth. cum vitell. ovor.* or deterge by some of the Mundificatives set down in the Cure of Ulcers in general: And if there be Occasion of more Sarcoticks, you may add *mel. comm. pulv. myrrhæ, thuris, rad. ireos*, to make it more exsiccant. But commonly the depending Part once opened, the Wound cureth in a few Days, by Bandage, &c. as abovesaid.

But if after all your Endeavours, these Ulcers grow Fistulous, you shall find the Cure of them in another Place.



C H A P. V.

Of Gun-Shot Wounds with Fracture.

Having declared unto you the Way of curing Gun-Shot Wounds in the soft and fleshy Parts, I purpose now to proceed to the curing them, as they are complicated with Fracture of the Bones, whose Firmness, Dryness, Stability, and Solidity, cannot defend them from these Inconveniences; nay, in the Case I am to speak of, they are rather Discommodities. For when the Bullet striketh like Lightning, were they softer it were the better, that the Bullet might pass, and not shatter them. There is not any of the five Sorts of Fractures mentioned by the Ancients, which these Blows will not occasion. Sometimes they will cleave the Bone *assulatim*, according to the Length; and otherwhile they will break it athwart; other times they will divide it like the Scales of a Fish: Nay, if the Bones be drier than ordinary, (as in elderly Men, and such in whom Nature or Diseases have made them so) they will grind the Bone like Meal. Yet I have seen and dressed a Soldier that hath been shot through the Joint of the Ankle, without ever breaking the least Part of the Cartilage.

The Ways to know when there is a Fracture in the Bone, are many.

Signs of Fractures.

1. Hippocrates bids us compare the sound Parts with the Parts affected, and observe the Inequality.

2. You shall perceive a Cavity, if you touch the Parts above and under the Fracture.

3. If you handle the fractured Member, you shall perceive a Crashing of Bones, by reason of the mutual Attrition of the hard Bodies.

4. There will be extraordinary Pain, in regard of the Divulsion of the Nerves, and Distortion of the Tendonous Bodies; also a pricking in the fleshy Parts, by the sharp Ends or Shivers of some Bone.

5. There

5. There will be an Impotency of the broken Member, so that the Patient cannot lean upon it.

6. The antecedent Cause (Gun-Shot) will teach much in this Case, than which there never was (nor ever will be, I believe) invented a more powerful one.

7. The Asperity and Inequality, or Roughness of the Bone, manifest it to you : But the Search will give you no small Assurance.

Concerning Prognosticks, you shall understand,

1. Bones receive a quicker Agglutination in Sanguine than in Cholerick Bodies, by reason of the Benignity of the Serum, which sendeth out better Matter for a Callus.

2. Bones are broke with less Danger in the Middle than near the Joint, where they are both more hard to be restored, and to be kept so restored ; and because of the Multitude of Symptoms, (which in such Wounds cannot but supervene) are not, without great Difficulty, to be cured.

3. And lastly, those Fractures are most dangerous, which are made so deep in the fleshy Parts, that your Hands cannot well come at them, to extract the loose Bones, and place the other right, and retain them so by Bandage ; as those of the *Pubes*, *Os Ilion*, *Sacrum*, &c. So also all those Fractures made by Splinter are exceeding dangerous, they generally shattering the Bone to Pieces ; in which Case the Nerves, Tendons, &c. are grievously pricked and torn, and are subject to extraordinary Pain, Inflammation, Convulsions and Death, unless immediate Remedy be had by removing those Bones, or by Amputation of the Member.

Amongst the Cruisers in private Frigates from *Dunkirk*, it was complained, that their Chirurgeons were too active in amputating those fractured Members. As in truth there are such silly Brothers, who will brag of the many they have dismembered, and think that way to lye themselves into Credit. But they that truly understand Amputation and their Trade, well know how villainous a thing it is to glory in such a Work.

In the *Roman History*, you'll find it was not allowed at all : *Livy* tells you their Reward amongst them. But later Experience judgeth it commendable, if it be necessary ;

sary ; and in such shattered Limbs, where there is no Hope of preserving the Patient's Life otherwise. And then it must be done in its proper Time, that is to say, suddenly upon the Receipt of the Wound, before the Patient's Spirits be over-heated either with Pain, Fever, &c. Of the Necessity of doing it speedily, I shall here give you one remarkable Instance.

Observat. A *Scotish* Soldier was brought to me out of the Field, at the Battle of *Worcester*, shot with a Musket Bullet into the Elbow-Joint, which fractured not only the Ends of the *Radius* and *Ulna*, but likewise that of the *Adjutorium*. Upon Sight whereof, I called *Will. Clarke* (now a Chirurgeon at *Bridgnorth*) and other my Servants about me, to cut off the Arm : And the while I endeavoured to encourage the Soldier to endure it ; in Answer thereto, he only cry'd, *Give me Drink, and I will die.* They did give him Drink, and he made good his Promise, and died soon after ; yet had no other Wound than that. By which may be perceived the Danger in delaying this Work to the next Day, when the aforesaid Accidents have kept them watching all Night, and totally debilitated their Spirits. Which happens not, if it be done in Heat of Fight ; for then, while they are surprized, and as it were amazed with the Accident, the Limb is taken off much easier : And if it be the Arm, some of them will scarce be kept in the Hold while the Ship is close engaged in Fight. In the Heat of Fight, I cut off a Man's Arm ; and after he was laid down, the Fight growing hotter, he ran up, and help'd to traverse a Gun. And a *Walloon* earnestly begged of me to cut off his shattered Leg, which, whilst I was doing, he cried, *Depeche vous connous vendrone a terre mous bioron.* Also others have urged me to dismember their shattered Limbs at such a time, when the next Day they have professed rather to die. But amongst us aboard in that Service, it was counted a great Shame to the Chirurgeon, if that Operation was left to be done the next Day, when Symptoms were upon the Patient, and he spent with Watchings, &c. Therefore you are to consider well the Member, and if you have no probable Hope of Sanation, cut it off quickly, while the Soldier is heated and in Mettle. But if there be Hopes of Cure, proceed rationally to a right and methodical healing of such

such Wounds; it being more for your Credit to save one Member, than to cut off many. This following Method is the best

Cleanse the Wound first from all strange Bodies, as *Cure.* Bullets, Armour, Apparel, and Shivers of Bones; so shall the Cure succeed more happily. For Instance:

A Gentleman Volunteer, skirmishing with the Enemy *Observat.* before the City of Worcester, was brought to us run thro' his Arm in the Middle of the *Biceps* with a Sword, and shot with a Musket Bullet in the same Shoulder under the *Os scapulae*, which took away the *Coracoides*, and tore the Ligaments in other Parts of the Joint. We dressed the Wound inflicted by the Sword with Agglutinatives, healing it by the first Intention. We enlarged the Gun-Shot Wound, pulled out the Bullet and Pieces of the *Coracoides*, &c. and dress'd it up with Digestives and lenient Embrocations, &c. and afterwards deterged with *mundif. Paraceisi.* He being *Will. Clarke's* Acquaintance, he took Care of him, and hasten'd the Exfoliation of the Bones with *mel. ros. & spir. vini.* Afterwards, being near cured, he made his Escape into his own Country. Many Instances of this Kind may be given, if it were necessary.

If the Fracture be near a Joint, the Violence of the Blow will many times add a Dislocation also to it. If that happen, restore the Joint first to its Place, before you meddle with the Fracture. These Dislocations are made by great Shot or Splinters of Wood, whose Force shatters the Limbs in Pieces, or carries them quite away. But this latter rarely happens, but usually when the Member is shattered, it hangs by some little Part of a Tendon, Musculous Flesh, or Skin. In which Case, *Smooth the Stump.* your Work is, with a good Razor or Knife, presently to plain the ~~Stump~~, and pull up the Flesh, that you may saw off the End of the Bone close to it.

One had his Arm shot off above the Elbow. We *Observat.* dress'd him up at first in haste, and at the next Dressing his Shoulder proved out of Joint. We could not see it, by reason of the Anguish of the Stump; which was a greater Pain to him than his Wound, and troubled him many Months after. But so it happened, and in short Stumps it is remediless. One of our Captain-Reformadoes had been served so formerly with his stumpt Arm.

If you will endeavour the remedying it, you must do it by Help of a Bandage made above the Stump : But if it be above the Elbow, how will you fasten it ? Yet in some Bodies the Bone will be restored easily ; therefore attempt it before you dress the Member.

Observat.

In another that had his Leg shot off, in the Place of Amputation below the Knee ; some two Months after, when I wondred the Bone did not exfoliate, I put in my *Forceps* to try whether any Part of the Bone was loose ; and finding it very loose, I took hold of it gently, and feeling it willing to come away, I pulled it out. It was the *Apophysis*, or Head of the *Os tibiae*, which makes the Knee. I was surprized at it ; but, considering what was loose must away, I pulled it out, to the Amazement of the Lookers-on. This was relax'd from its Ligaments by the Force of the Blow.

Extension.

In these fractured Wounds made by Gun-Shot, the Chirurgeon ought to propose two Things to himself ; first the Fracture, and then the Wound. To proceed orderly, you begin with the Fracture, *viz.* with the Extension and Coaptation, that thereby the Fracture may be reduced to its proper Seat : Which, in all these Cases must be performed with much Steadiness and Discretion ; not with such Force as in those Fractures that are without a Wound, lest the Musculous or Nervous Parts, being torn, bruised, or crushed, should suffer extreme Pain, Convulsions, &c. Before you begin this Operation, if the Wound be not large enough, make it so, that you may the better pull out the extraneous Bodies, whether Slug, Bullet, Rags, Splinters, or Shivers of Bones ; so shall the Extension be made the easier, and be less subject to Inflammation, tho' you should not set it at that Instant ; for a small Extension will afterwards serve. Whereas if the Wound be not so cleansed, those extraneous Bodies, nay, the smallest Shivers of the Bone will raise such Disturbance, as will render it incapable of Digestion. Therefore what *Hippocrates* saith of attending to the third, seventh, or eleventh Day, in case the Fracture be not reduced before Inflammation, would in these Cases never be ; for by that time, the best that could be expected would be Apostemations and crude Tumours, too big to be discussed. Therefore, however the Reduction of the Fracture may have been omitted,

yet

yet it will behove the Chirurgeon then consulted, to extract the extraneous Bodies immediately; so shall it lie more quiet, and fitter for Reduction at his more Leisure. But to avoid these Inconveniences, make your Extension so soon as you may, and restore the Bones to their former Place, with what gentle Dexterity and Lenity you can possibly. If the Wound be narrow, dilate it, as I have said, by Incision at the first: For these Wounds require more Dilatation than any other, that not only the bruis'd and vitiated Blood, and other Excrements may have a free Passage, but also, by this Means, the Shivers of Bones (of which these Wounds use to be very full) may, with less Trouble, be extracted by yourselves, or discharged by Nature.

If you make not this Dilatation in the Beginning, you may afterwards perhaps be forced to do it, when the Part is accompanied with great Defluxion and Pain, or when the Bones are corrupt by Retention of the Matter: And what Condition it will then be in to admit of Incision, may easily be guessed by any one that hath common Sense.

After it is laid open, consider whether the Bone be bare or not; which you may satisfy your self in by your Eye, Finger, or Probe. If it be bare, you must apply next to it some dry or exsiccant Medicine; *Sicca siccis gaudent*, dry to dry. Of this Sort are dry Lint, Powders of the Roots of *Iris*, Myrrh, Aloes, *Thus*, &c. Forbear the Application of greasy Medicaments to it, for they make the Bones foul, and hinder *Callus*. Yet the Parts adjacent require Digestion; therefore apply over them your Suppuratives warm, such as have been proposed in Simple Gun-Shot. Then dress up the fractur'd Member with *empl. e bolo*, or this following: Rx *empl. dia-chalcith.* with the Addition of *colophon. pulv. rad. consolid. maj. boli Armen. cort. granator. succ. plantag. cum ol. myrtill. & lumbricor. an. q. s. Misc. & fiat Emplast.* Then apply over the Wound a Stupe or double Cloths wrung out of Red Wine, wherein have been infused *flor. ros. rubr. balaust. sumach. bacc. myrtill. summit. absinth.* or such like: This Compress will serve to keep the Lips of the Wound smooth, and defend it from the Injury it may receive by Bandage.

Dressing of
Gun-Shot
with Frac-
ture.

Deligation

The next Thing which is required in these fractured Wounds, is Deligation; for unless they be rightly fitted; none of these Fractures, of what sort soever, can be well united. In simple Fractures without a Wound, all kind of Bandage may be admitted; whereof you may see in my Lecture of these Fractures, various Sorts, with many Circumvolutions about the Member: And once opening in seven Days will serve their Turn. But in these another Method of binding is required; for here the Bandage is to be loosen'd daily, and the Wounds to be look'd into and dress'd, they being here to be long kept open for Discharge of excrementitious and purulent Matter, with which they abound; also for the Exfoliation of carious Bones, which lying there would corrupt the sound ones.

*Bandage
to be daily
loosened in
Gun-Shot
Wounds
with Frac-
ture.**Manner of
Bandage in
Gun-Shot
Wounds
with Frac-
ture.*

Therefore, in these kind of Wounds, you must use such a Bandage as may least shake the fractured Members: For they being every Day to be dress'd, the so often rowling them up would cause grievous Pains, and hinder Union. Therefore it is that Authors have invented so many Kinds of Bandage to answer the Intentions of dressing them, and yet keep the Member immovable. Your Bandage, in this Case, is to be made of softer and broader Linen Cloaths than what we use in simple Fractures, that it may comprehend both the Fracture and the Wound, and keep the Lips down, yet not hurt them by its too hard Compression.

Therefore we make Choice of Piece of Cloath folded three or four times double, to give it the more Strength, and of such a Breadth as may encompass the Lips of the Wound, and the fractur'd Parts; also of such a Length, as to come once about the Fracture. This Cloth must have three Slits from the Ends to the Middle; which Middle must lie undivided underneath, to bear more equally the fractured Member; and the Ends must come over one another, with a Compress between over the Wound, to press the Lips thereof equally down, which would otherwise become crude, and pout out with great Lips. The Compress also serves to receive the Matter, and fill up the Inequality. These are so to be fasten'd, that you may dress and undress the Wound, without disturbing the Member.

But because it happeneth, that in these Gun-Shot Wounds the Bones are shrewdly shatter'd, and the Wound lacerated, and by reason of the Largeness of the Fracture and Wound, it is extremely painful ; the Member also is rendred so weak, that it cannot be kept steady by this Bandage ; therefore we make use of *Ferulae* or Splints, whereof I have made mention in my *Splints.* Lecture of Fractures in general, with the Judgments of the Ancients, who have been very industrious in contriving Ways to make equal Compression, and leave a Way for the dressing of these compound Fractures.

They are not to be used till the Inflammation and *Flux of Humours* be off, which is not until the Seventh *used.* Day ; during which we use *Splenia*, which are Linen Cloths folded four times double, and cut in Length and Breadth like the *Ferulae*. These are to be spread with Galen's Cerote, or any Cintment, that so they may adhere to the Part only until you have put the Bandage over it. And this is that I propose in all Fractures where there is Pain and Fear of Inflammation, and is especially necessary in these.

They will handsomely strengthen the Part, and make such equal Compreſſion, that the Bones may be kept in their Place, the serous Humours pref'd out of the *Cavernulae*, and the fractured Member lie soft ; which is a great Help in these Wounds, the whole Welfare of the Patient depending upon the easy Bandage and Position of the Member. The Pain and Inflammation gone off, and the Wound digested, (if you think the Member not so ſubject to Inflammation, or that it requireth a greater Strength to ſupport it) you may use Pastboard cut into Pieces proportionable to lay over those *Splenia* : Or, having fastned the *Splenia* by the broad Bandage, with three Heads, cut a Piece of Pastboard fit to receive the lower Part of the Member, and leave a Place commodious for dressing the Wound. Over the other Part of the fractured Member, you must place another Piece of Pastboard to anſwer unto the former. These ought to be wet, that they may lie more pliant. About the Pastboard make a Bandage with three Ligatures, which you must fasten in the most convenient Place, for the Ease of the Patient. But if the *Splenia* be wet in White of

Eggs, and applied, they will strengthen the Member, and also keep it steady, without those.

Lamine, or Plates. If you think those of Pasteboard not strong enough, you may use *Lamine*, Copper or Tin Plates lined with soft Linings, to receive the fractured Member, with Loops in the Out-side, to receive the three Ligatures answerable to those which lie underneath next the Plaster, that they may be fasten'd and loosen'd at Pleasure, without disturbing the Fracture, in the daily dressing of the Wound. And if it be in the Thighs, the Plates are best; these Parts requiring such as are of great Strength and Length, and of such Compass as may take in the lower Half of the Member. These *Lamine*, or whatever else you use, must have a large Hole cut in them for the Wound to be dressed through.

But I have always observed Inconvenience in these Plates; that there is not so good Compression made upon the Lips of the Wound thro' those Holes, as to hinder them from thrusting out; whence there ariseth a Laxity and Indigestion in the Wound: And besides, the Matter that so dischargeth, heats the Parts, and in hot Weather corrupts and breeds Maggots. Therefore I make the Pasteboard, or *Lamine*, over my first Bandage, to encompass so much of the lower Part, as may support the Fracture; and come within an Inch of the Wound; and over the Wound it self, I fasten a *Splenium* of Cloth folded four times double; or a *Ferula* of Tin, Copper, or Pasteboard, lined according as I judge the Part can bear, and such as may be taken off at each Dressing.

The first Bandage, next to my Cerote, makes an equal Compression, by its three Heads meeting over one another; the lowermost presseth the Humours from below upward, and with the Help of its next Fellow, keeps the Bones together, and forceth the Matter out of the Wound: Also by the Help this middle Bracer hath of the uppermost, the Matter is press'd out of the upper Part of the Fracture and Wound, to the Orifice. It also restraineth the Influx of Humours from above, by Virtue of the Defensive lying under it. In the dressing these Wounds, you are only to undo the middle Binder,

to

to come at the Wound ; having a special Care that this Bandage be neither too hard nor slack, but indifferently made, to the Ease of the Patient.

Having thus proposed to you the Way of Deligation, I shall now proceed to the last Operation performed in these Fractures of a Wound, which is a commodious Position or placing of the Member, which (as I have told you in the Lecture of Simple Fractures) ought to have three Conditions.

1. It must lie soft, lest the Compression offend the hurt Parts, and cause Pain and Inflammation.

2. Equal; for if the Member be placed otherwise, it becomes distorted, and the Operation succeeds ill.

3. Lastly, It must lie higher than the Parts next the Body, especially the first three or four Days. For if it incline downwards, the Humours, by their own Weight, will easily flow to the Part afflicted. How this Position is performed, I have set down in the Lecture of Simple Fractures, to which I refer you.

The fractur'd Bones of the wounded Part thus restored to their natural Places, and the Wound digested ; also the Inflammation and other Accidents gone off, which is commonly about the seventh or ninth Day ; you shall then unloose the Bandage, take off your respective Medicament, and apply the *Emplastr. catagmat.* in our London Dispensatory (or some of these under-written) over the fractur'd Member, which may add Strength to the Part, and further the Generation of *Callus*. *R. resinæ abiet. ceræ, an. ℥vj. pulv. cort. tiliæ ʒij. succ. geranii, ʒij. coq. ad Cerati consistentiam :* Or this, *R. mucilag. rad. consolid. maj. visci pomor. & populeon. an. ʒij. succ. geranii ʒvj. osteocoll. ʒij. pulv. cort. tiliæ ʒij. vitell. ovor. num. xx. terebinth. ℥js. ol. lumbricor. ʒij. coq. omnia bene permixt. ad Cerati consist. pro usu.* But if you keep up the Temper of the Part, you need not doubt of a *Callus*. I commonly, in these Cases, make use of *empl. stict. Paracels. part. ij. empl. diachalcit. part. j.* Over these apply a double Cloth dipt in Red Wine, wherein have been boiled some of the above mentioned Plants. Then place the former Bandage again, and over it those *Laminæ* of Copper, or *Splenia* of double Cloths dipt in Whites of Eggs, and wrung out hard. These

latter will fit close to the Part; and after they are dry, will support the fractur'd Member well.

After the ninth Day, we suppose the Wound well digested; therefore we forbear the Use of Suppuratives, and use such Medicines as are detergent, as *mundif. Paracelsi*; or, if you please, Rx *vincæ pervincae, peti, persicariæ, beton. an. Mj. flor. hyperic. verbasc. an. Pj. rad. aristoloch. utriusque an. ʒſſ. thuris, myrrhae, sarcocoll. ireos, an. ʒij. coq. in vino albo, addendo colaturæ mellis rosacei q. s.* This being cast in with a Syringe, will deterge and incarn: Or you may make it into an Unguent, by the Addition of *terebinth. Wax, and ol. hyperic.* and apply it upon Dossils, Pledgits, or Tents.

If there be *Caries*, you may make a Decoction of *scordium, vinca pervinca, peucedanum, gentian. cort. guaiaci, rad. ireos, myrrha,* in Wine, adding *spir. vini, or extract. scordii.* If the *Caries* yield not to these, touch it now and then with some of the following Medicines: Rx *ol. myrrhae distillat. per descensum & purificat. cum spir. vini ʒſſ. olei caryophill. ʒij. ol. sulphuris ʒſſ. Misc.* This will in a short time, remove the Cariosity; afterwards you may proceed by Epuloticks.

Vulnerary Plants are here of great Use, and may be prescribed as followeth: Rx *aristoloch. rot. ʒij. fol. serpentariae, consolidæ utriusque, geranii, columb. saniculae, an. Mj.* beat them into gross Powder, and boiling them in a Gallon of Wine, in a Vessel close stopp'd, give the Patient thereof Morning and Evening ʒij. at a time. You may give ʒj. of *osteocoll.* powder'd in a Draught of it, or the Decoction of *vinca pervinca* made with Wine, for confirming and hastening the *Callus.* In the rest, proceed as in the latter End of Simple Fractures is mentioned.

*I. Observation of a
fractur'd
Arm.*

A Soldier being shot by a Musket-Bullet into the Fore-part of the Arm, near the *Biceps*, it fractur'd the Bone, and passed quite through. I endeavour'd, by Extension, to place the fractur'd Bone even together, but could not. Upon which I dilated the latter Orifice by a large Incision, according to the Rectitude of the Member, to pull out those Fragments of Bones, which

which hindred their right Coaptation ; and putting my Finger into the Wound to that Purpose, I pulled out a ragged Piece of a Bullet : Whether it was Part of that which had passed through, was the Question. Some of the By-standers thought he was shot with a Brace of Bullets : But I rather think the Bullet was torn by the Bone, and that this Part was it which had made its Way through. However, by this Extraction, the main Bone was rightly placed, the Shivers with the extraneous Bodies removed, the Matter happily discharged by this depending Orifice, and the Patient was cured by the common Intentions of healing these fractur'd Gun-Shot Wounds. Whereas, if I had taken it for granted, that the Bullet was passed through, and contented my self in having endeavoured the reducing of the fractur'd Bones, and so dressed him up, it had certainly inflamed and gangrened. This confirms that Doctrine in setting of Bones, that if any Bone will not be placed equally amongst his Fellows, you ought to cut upon it, and take it out.

In Heat of Fight at Sea, amongst the many wounded Men that were put down into the Hold to me, one of them had his Right Arm extremely shattered about two Fingers Breadth, on the Out-side above the Elbow, by a great Splinter. I ought to have cut off this Man's Arm presently : But a sudden Cry that our Ship was on Fire, put me in such Disorder, that I rather thought of saving my self than dressing my Patients. I hastily clapp'd a Dressing upon the Wound, and rowled it up, leaving his Arm in his other Hand, to support it, and endeavoured to get up out of the Hold as others did, verily believing I should never dress him nor any of them more. But our Men bravely quitted themselves of the Fire-ship, by cutting the Sprit-Sail Tackle off with their short Hatchets, (which they wore during the Fight, sticking in their Sashes). So we were freed of the Fire, and by our hoisting up the Top-Sails, got clear of our Enemy, and I return'd to my Work. But I was at a Loss what to do with this Man, who lay, not far off, complaining of his Arm. I would have cut it off instantly with a Razor, (for the Bone being shattered, there needed no Saw :) But the Man would not suffer

me to meddle with his Arm, he crying, It was already dress'd.

The Fight being over, and we got into the next Port, I caused this Mariner's Bed to be set up; (which was four Pieces of Wood nailed together and corded, and a Bear's Skin laid upon it, and fasten'd between two Guns, to the Carriages:) Upon this I saw him placed; and having ordered his Arm to be laid, so that I might the better come to dress it, I sent for Dressings, and laid them orderly upon a small Pillow, well stuffed and quilted in the Middle. Upon this Pillow I first laid a soft double Linen Cloth, next to that three Ligatures, then a Pastboard wet in Vinegar, to make it more soft and pliant; upon that I laid a double Cloth, of such Length and Breadth as might serve to encompass the fractur'd Member, which I cut from each End to the Middle, into three Binders: Over the Middle of this I placed a *Splenium* of Cloth four double, four Fingers in Breadth, and of such a Length as to give Strength to the Fracture: Over this lay my Defensative spread upon a thick Cloth, of such a Breadth and Length, as to take in the whole Arm. Dressings thus laid upon the Pillow, I cut off the other from his fractur'd Arm, and placed the Pillow, with these Dressings, close by his Side; so that I saw his Arm laid, as I design'd, upon my Restrictive, and his Hand upon his Breast. Then putting my Fingers into his Wound, I pulled out first a Piece of a Splinter an Inch thick, or thereabouts, more or less; then Rags and Bones, great and small; I left not the least Shiver. When I had so cleared the Wound of all the extraneous Bodies and loose Bones, I was amazed to feel what a void Space there was between the Ends of the Bones. But I proceeded, and cut off the lacerated Lips, which were of no Use, and dress'd up the Ends of the Bones with a Couple of Dossils dipt in *spir. vini* and *mel. ros.* warm. The rest of the Wound I dress'd as warm with *axung. porcin.* and *Merc. præcipit.* with some little *ol. terebinth.* spread upon Dossils, which I placed lightly within the Wound, and upon Pledgits without, with an *empl. diachalcit.* malax'd with *ol. myrt.* over all the Wound. Then I embrocated the fractured Arm, *cum ol. myrt.* & *olivar. immatur.* and a little *acecum*, bringing my restrictive Emplaster, which lay under

the

the Arm, over the whole Arm, from the Arm-Pit to the Elbow, and close round about, only leaving a Space to dress the Wound.

This gave a Strength to the weak Member, and was designed to prevent the Influx from above. Just under this Emplaster there lay a *Splenium*. To answer that, I applied three more, one on each Side, and another above: Which Four were of such a Size, that they, lying a little off from one another, encompassed the Arm. They were spread lightly with a little Cerote made of *axum-gia*, and Wax to make them adhere where I placed them.

Then I brought the Bandage which lay under the *Splenium*, with three Heads at each End. The lowermost of these took in the lower Part of the Arm, from the Elbow upward, with Part of the Fracture, and was fastened on the exterior Part of the Arm. This pressed the *Sanies* from the nether Part of the Arm to the Wound, and hindred the Lapse of Matter that Way. The middlemost was made to press the Matter out of the Wound, and keep the Lips down. The uppermost served to restrain the Influx, as I said, and pressed that Matter out which was already in the Part. This Bandage was made with great Moderation, and so fastned. that it might be loosen'd without Trouble to the Patient. Then I brought the wet Past-board close to the Sides, and cut another Piece to answer it, which I wetted *in aceto*, and by the three Ligatures under, made them fast, but without Disturbance to the Patient. If it could not have been so put on, I should have forborn the Use of them, the Cure of these Wounds consisting in the easy Dressing and quiet Position, without which you will not cure one of them. The Pastboard, as it dried, stiffened, and retained its Shape, preserving the Fracture in the Position I left it, and that with a very slack Bandage. Thus I finished the first Dressing, leaving my Patient in much Ease. He slept pretty well that Night, and was the next Day as well as I could expect. He was let Blood the second Day, and kept to a spare Diet: But we allowed Wine as a Cordial to all our Patients.

The third Day I dress'd him again, took off the upper Pastboard, and loosen'd the Heads of the main Bandage;

also I took off that *Splenium* which was over the Wound, and raising up the Emplaster from the Wound, took out many Dossils, found it warm and well disposed, and dress'd it up quick with my Suppuratives hot, and an Emplaster as before. I stirred not the Restrictive, but made now a Compress more particularly for the Wound, purposing not to remove the two outermost Heads of the main Bandage, unless it were sometimes to give a little Breathing to the Member : But the Middle I open'd as often as I thought fit, to dress the Wound. The other Two had short *Splenia* to make the Bandage equal. But I was not then satisfied how the Space between the fractur'd Ends of the main Bone could be supplied with *Callus*. My Patient was easier than any of my other with fractur'd Wounds. When it came to my Turn to be visited by my Brother Chirurgeons of our Squadron, they did not dislike the Wound, nor my Way of Dressing, (for we being us'd to see one another's Patients, had all much one Way of Dressing :) But they laugh'd at the Excuse I made for not cutting off his Arm, and doubted I should yet be forced to do it. But I kept my Patient flat on his Back, and that, after a While, was his greatest Pain: for the Wound digested, and the Tumour was not then considerable. After the Wound was well digested, and the bruis'd Flesh separated, I renewed the Dressings, taking all the old ones off, and fomented the Member with warm Water, to give a Breathing to it ; then applied a Catagmatick Emplaster, dress'd the Wound with *mundif. Paracels.* or such like, and bound up the Member as at first, and so continued my Way of Dressing as I saw Cause, putting into the Wound only a Dossil or Tent made upon a Skewer, soft and hollow, to give Way to the Wound to incarn ; I scarce using any Injection, but by gentle Compression assisting Nature, who seldom faileth in supplying the lost Substance in Wounds, if we disturb her not by improper Applications. The next taking off and renewing these Dressings of this fractur'd Member, was occasion'd some sixteen or seventeen Days after, by a troublesome Itching of the Part, which was occasion'd, I suppose, partly from his Liberty in Diet, partly by the Heat of the Weather, and want of Transpiration. Upon this Account I took off the Dressings, bathed

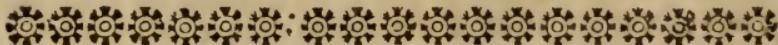
bathed the Member with Sea-Water, and dress'd him up with *emplast. de lithargyro*. The Wound was about this Time well incarned within, and the Lips beginning to cicatrize from their Edges, I dressed them with Epu-loticks, as *unguent. tutiae, &c.* All this while I kept my Patient upon his Back, and renewed not the whole Dressing until I was again necessitated. One Day coming from the Shore, (where our wounded Men had Liberty to lodge, if they desir'd it, and were dress'd up by us there) I found this Patient with a Heat all over his Body, like an *Erysipelas*; at which he was much affrighted. He had, it seems, drank Wine too liberally with his Mates (as they would most of them do, if they were any thing well.) Unless it rather proceeded from a Generation of *Callus*, in which Case it usually happens. *Erysipelas upon the Generation of Callus.* I let him Blood, and dressing him as in an *Erysipelas*, finding his Arm pretty strong, and his Wound healed within, and in a fair Way of cicatrizing, I raised him up, after he had lain about eight Weeks. All which While, I believe he never stirred his Arm from the Time I first placed it, but only while I renewed the Dressings; he being the most patient Man, in that Respect, I ever attended: And, in Truth, without that Submission, he could scarce have been cured.

There was in this Patient a strong *Callus* filling up the void Place of the lost Bone, at least two Inches, with little or no shortning of the Arm: But the Joint of the Elbow was so stiff, from the Position it lay so long in, that he could not stretch that Joint whilst I knew him, which was until that Ship was cast away.

My Memory will be much cried up, for rememb'ring so many Particulars in a Patient so many Years since cured by me. But if you consider how remarkable a Case it was, and in my Trade, there will be less wondring at the Possibility of it. You may enquire what was done by me in the Cure of Captain *Reade*, where the Loss of his Jaw was supplied by a strong *Callus*, and that Check made uniform with the other. It will be long rememb'red by the Standers-by, though not of our Profession. In our Sea-Fights, oftentimes a Buttock, the Brawn of the Thigh, the Calf of the Leg, are torn off by Chain-Shot and Splinters. All these are contused Wounds, and look black, and do too often deceive the unex-

unexperienced Chirurgeon, he taking them by their Aspect to be gangrened, and by dressing them as Mortifications, with *Ægyptiac.* and *spir. vini*, doth certainly sphacelate them; and those Persons die miserably afflicted.

Whereas, if they be consider'd rightly, though they look like Flesh long hang'd in the Air, of a dry blackish Colour, yet they have Warmth, and by Lenients, as is prescribed in simple Gun-Shot Wounds, they will digest, separate their Sloughs, and incarn. But they are slow in Digestion, and require good Fomentations and Embrocations, to cherish the native Heat, which is much weakened by so great a Loss of Substance. These require *oleum Terebinth.* to be mixt with your Digestive: But you must have a Care you do not inflame them, and cause Pain, by adding too much of it: A Spoonful to Six Ounces of your Suppuratives, is enough in the driest Habits. Your Judgment will best direct you, and your Patient's Complaint; it being unreasonable to hope that Wounds can digest while they are accompanied with much Pain.



C H A P. VI.

Of Gun-Shot Wounds in the Joints.

*Great Care
to be used
about these
Wounds,
and why.* THE Wounds of the Joints are subject to more grievous Accidents than those I have heretofore mentioned; therefore they require your more particular Care; the Tendons and Ligaments being inserted near the Joints for the Motion thereof: There are also Membranes, which do consequently render them of a most exquisite Sense. The Trunk of Nerves also in every great Joint passeth through, for the Use of the Member that is beyond it. To which I add, that the Part being exsanguous, the natural Balsam of the Body is here more sparingly supplied for the Help of the Cure.

W hat

What the Pains are, may be judged by the Wounds in the lesser Joints. Captain F. in *Musselborongh* Fight, was shot in one of his Fingers, and the next Day so grievously tormented, that he walk'd up and down like a Madman, and could take no Rest until his wounded Finger was digested: Yet his Pain was not so great in his wounded as in his well Fingers.

The greater Wounds are attended with much more *Prognostick.*
vehement Pain, Inflammation, *Delirium*, Convulsions, *stick.*
Gangrene, and are commonly deadly.

In these Gun-Shot Wounds, the extraneous Bodies and Shivers of Bones must be presently drawn forth: Therefore, if the Orifice be not large enough, make it so. But in enlarging the inner or lower Parts in the Hollow of the Ham, Arm, Arm-Pit, or Groin, have a Care, for they are subject to great Bleeding. The extraneous Bodies being drawn forth, hasten Digestion, by dropping and applying warm upon Dossils or Pledgits, some of these following Digestives; for Tents are to be used with Caution in these Wounds.

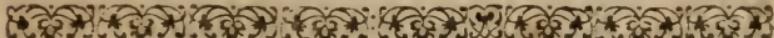
R terebinth. lot. in spir. vini ʒiiij. thuris, myrrhæ, mastich. an. ʒj. ol. hyperici ʒiiij. vitell. ovor. num. ij. croci ʒij. Or, R terebinth. ʒij, myrrhæ, thuris, corn. cervi uſti, an. ʒiiij. ol. scorp. de castoreo, lumbricor. sambuci an. ʒls. vitell. ovor. num. ij. Apply either of these warm. If stronger be required, you have ol. terebinth. de castoreo, scorpion, &c. R ol. terebinth. ʒj. ol. hyperici, cum gum. ʒij. euphorb. pulv. ʒj. drop this very hot, and apply the fore-mentioned Digestive over all, then embrocate the Parts about with ol. lumbrie. & hyperici, and lay over all this following Cataplasm: R farin. bord. & fabar. an. ʒvj. flor. cham. meliloti, ros. rubr. scord. absinth. pulv. an. ʒvj. Decoct it in the Broth of Offal, if you would have it lenient, otherwise in Oxymel, adding ol. ros. & chamæmel. Or this; R mucilag. radic. althææ, consolid. maj. an. ʒiiij. flor. ros. rubr. beton. cham. subtil. pulv. an. ʒls. farinæ lini, fænugræci an. ʒiiij. farinæ bord. & fabar. an. ʒvj. coq. in vino, adde ol. ros. & lumbricor. an. ʒls. mell. ʒij. vitell. ovor. num. iij. The Wound digested, you may deterge with this; R farinæ orobi ʒls. thuris, rad. ireos, an. ʒvj. succi apii ʒiiij. mell. comm. & terebinth. an. ʒij. Mis̄c. fiat Unguentum.

guentum. The Wound deterged, you may dress it with this Sarcotick. & *summit.* *hyperici,* *equiseti,* *plantag-*
beton. *an.* *Pj.* *rad.* *consolid.* *maj.* *tormentilla,* *an.* *3ij.*
serp. *hircini* *3iiij.* *lumbric.* *terrest.* *lot.* *ol.* *mastich.* *an.*
3ij. *vini odorif.* *q.* *s.* *coquant.* *ad* *consumptionem vini.*
postea colentur cum forti expressione, *deinde adde resina*
pin. *3j.* *thuris,* *myrrhae,* *mastich.* *aloes,* *an.* *3ss.* *ceræ* *3iiij.*
Misc. *fiat Unguentum S. A.* *Ol.* *Aparici* is excellent in
these Wounds, either alone, or heightened by any of the
former Prescriptions: So is the Balsam in the Chapter
of wounded Nerves. If the Bone be bare, you must
be careful that you do not foul it by your greasy Me-
dicaments: And if Pain be violent, and yield not to
Anodynes, cut off the affected Tendon, and whatsoever
corrupts; lest it taint the rest. But in these great
Wounds, you are first to consider how curable they are;
and endeavour to preserve the Life of your Patient by
a timely Extirpation, before his Spirits be too much ex-
hausted. Of which this following Story will give you
Warning.

Observa-
tion of a
Shot thro'
she Knee.

A Page of Lieutenant-General D. L. was shot through
the Knee. The Bullet entred in by the lower and
exterior Side of the *Rotula*, and passing thro' the Joint
out in the Hollow of the Ham, tore the Ligaments and
Nerves, and fractur'd the Joint as it passed, rending
the Artery in going out. This Wound was mortal the
very Minute it was inflicted, and the Party ought then
to have been dismembred: But such Proposals were not
admitted of in the first Dressing, whilst there was, as
they judged, Hope. Afterwards the vehement Pain
brought suddenly on severe Accidents, as Fever, *Deliri-*
um, &c. and then it was too late to make Amputa-
tion. I made my first Dressing by the Application of a
Digestive dipt *in ol. lumbric.* warm, and embrocated
the Parts with *ol. ros.* *cum aceto*, applying my Restrictive
over all. In the depending Orifice there was a throb-
bing of the Arterial Blood, as in an *Aneurisma*, the
Blood being choak'd in by the contused Flesh: It there-
fore was not there to be tented, for fear of making a
Flux of Blood; nor yet could we hope to stop the
Bleeding by Cautery, actual or potential, that Part be-
ing full of Ligaments and Tendons, the burning where-

of would have been difficult, and grievous painful. Wherefore I dressed that Wound with the same Digestive, mixt with *pulv. Galeni*, upon Dossils with thick Pledgits, and some of the same Restrictive over that, with such Bandage as that Part was capable of; hoping this Way to hinder the Influx of Humour, and thinking by such Dreislings the Wound would digest. But the Pain increased vehemently, and yielded to no Application, nor was there any Possibility of conveying any Instrument, whereby I might thrust or pull out the Shivers of Bone, if any such were in between the Heads of the Joint. Mr. *Penicuke*, formerly General Chirurgeon to the *Scotish* Army, and other Chirurgeons, were with me at the Dressing of this Patient: But, in spite of all our Endeavours, the Putrefaction increased, and was attended by *Delirium* and Spasm. Death followed, as commonly it doth in all such Wounds of the great Joints. I could instance it in many, but the late Case of Sir *J. L.* may serve for all. He had many of our most experienced Chirurgeons, with the eminentest Physicians to help them; yet they had no better Success. Therefore at Sea, while they are warm with Heat of Fight, we dismember them, and by actual Cautery stop the Flux of Blood.



C H A P. VII.

Of Gun-Shot Wounds in the Belly.

I Have now briefly run thro' the Parts not principal, and purpose next to say somewhat of the principal Parts, as the Belly and Breast. And that you may the more certainly know the Part wounded, I shall give you a short Description of them, and then shew you how such Wounds are to be handled in order to their Cure.

The Belly is called *Abdomen*, or the inferior *Venter*. *Abdomen* It begins from the Bastard Ribs, and extends itself to the Groins, and is divided into three Regions by our Anatomists, the Upper, Middle, and Lowermost. The upper-

uppermost is called *Epigastrum*, the middle *Regio Umbilicalis*, the inferior *Hypogastrum*. The Sides of the uppermost are termed *Hypochondria*. The right *Hypochondrium* possesseth all the Liver : In the Left is the Spleen. Between these is placed the *Ventriculus* or Stomach. In the middle Part of the *Abdomen* is the Navel ; round about which lie the Guts, and behind those, on each Side, the Kidneys. In the Sides of the inferior Part are the *Ilia*, with the *Pecten* or *Pubes* in the Middle, under which lies the Bladder. Thus much so the internal Delineation.

The *Abdomen* consists moreover of Parts containing and contained. Parts containing, or Teguments of the *Abdomen*, are, either the common, which reach all over the Body, as the *Cuticula*, *Cutis*, *Pinguedo*, *Membrana carnosâ* : Or the particular, and proper to this Place, which are the Muscles of the Belly, the *Peritoneum*, and in respect of the Guts, the *Omentum*. The Parts contained are some of them designed for the Nutrition of the whole Body, others for Expurgation, and others for Generation. The Stomach, small Intestines, *Mesenterium*, *Vena Porta*, *Cava*, *Arteria magna*, and *Cæliaca magna*, the Liver and Spleen serve for Nutrition. The Bladder, Gall, all the Intestines, but especially the great ones, Kidneys, and Ureters, for Expurgation. And for Procreation, the *Vasa præparantia & deferentia*, *Prostatae*, and *Uterus* in Women. These Parts containing and contained, are subject to Gun-Shot, whence various Species arise of these Wounds. Sometimes the containing Parts, as the *Cutis*, *Pinguedo*, *Caro Musculosa* only, are wounded ; so as neither the *Peritoneum*, nor the other internal Parts, suffer any Hurt.

*Wounds
not pene-
trating.*

And this hath happened to many in the Service, who have been brought to me as mortally wounded, whereas, upon Search, I have found the Impression only upon a greasy Leather Jerkin, or their Bellies black, and a little scratch'd by the Bullet. Yet even these are subject to Tumour, and so do require lenient Embrocations, with an *empl. e bolo*, or the like. In others, the Skin and Flesh under it, is sometimes wounded, and no farther. These are by us called Wounds of the Belly not penetrating, and are cured as Gun-Shot Wounds in fleshy Parts : In which Cases all those Applications are approved

proved of which have been delivered in simple Gun-Shot Wounds.

But this I must take notice of to you, as having often observed it, not only in Gun-Shot Wounds, but in Abscesses of the Belly, that from the Laxity of the Parts they are subject to great Defluxion: Especially in scorbutical and ill Habits of Body, the Matter is apt to insinuate itself amongst the circumjacent Muscles, raising them up, and rendring them sinuous Ulcers, difficult of Cure; and that because we cannot make such Bandage on them, by reason of their Figure, Site, and perpetual Motion, as elsewhere may be made. These thus *Wounds per-*
netrating. briefly considered, we pass to the other Species: For the Bullet is for the most Part carried with such Force, that it not only wounds the fleshy Parts, but also pierces the *Peritonæum*, hurting most an end the Internals; it being indeed impossible that the Bullet piercing the Parts containing should miss the contained, which are soft and tender.

I have seen, sometimes, in the Wars, a Soldier shot scarce to the *Peritonæum*, yet the Contusion hath been so great, that the *Peritonæum* hath come off upon Digestion: In which Case the Bowels commonly suffer under severe Cholicks, and there ariseth Difficulty of Breathing, &c.

If the Bullet penetrates thro' the *Peritonæum*, tho' no farther, yet the Contusion makes foul Work, and requires speedy Relief: But if it hath wounded the internal *Viscera*, then you must consider what the Parts are that are wounded, whether the Liver, Stomach, or which of the Intestines; which you may apprehend from the Site of the Part, and the Accidents accompanying such Wounds, also by the proper Symptoms of each Part.

According to *Celsus*, Lib. 5. Cap. 26. the Liver being *signs of* hurt, there followeth an Effusion of gross Blood: If the *Wounds of Porta* or *Vena Cava* be hurt, the right *Hypochondrium* is *the inter-* oppressed: If the Artery be wounded, the Blood is *nal Parts* florid, and bursts impetuously forth, and the Patient ex- *of the Ab-* pires with it. But if the Stomach be hurt, *Singultus* or *domen.* Hiccough follows, with Vomiting and *Nausea*, and the Patient's Sustenance comes out of his Wound with the Chyle, and cold Sweats shew his languishing Condition.

If the lesser Intestines be wounded, he will be troubled with poracious Vomiting, and what he eats or drinks will pass out of his Wound in less than Half an Hour; and so it will continue to do as long as he lives. If the great Intestines be wounded, the Excrements and filthy Smell will demonstrate it. If the Wound be on the Left *Hypochondrium*, under the short Ribs, you may conclude the Spleen wounded; the Blood which floweth forth is black; there is also a Tension and Difficulty of Breath. If the Kidney be hurt, the Wound is in the Region of the Loins, near the *Vetebra*, under the *Diaphragma*. The more certain Sign thereof is from the Pain's reaching to the Groins and Testicles, with Difficulty of Urine: And that Urine which he voids, is either mixt with Blood, or else pure Blood. If the Ureters be wounded, the Urine comes out at the Wound. If the Bladder be wounded, that Part of the Belly is tense, he hath great Pain in his Groin, and his Urine is discharged by the Wound; the Stomach suffers by Consent, and the Part wounded demonstrates it. If the Womb be wounded, the Groins and *Coxa* are afflicted with the Pain, and the Blood not only flows by the Wound, but *per Vulvam*; they are troubled in Mind, and have other shrewd Symptoms of Death.

Prognostick.

For what concerns the Presage of these Gun-Shot Wounds, if they be only in the Region of the Belly, they are not without Peril, especially if the Middle, where the *Linea alba* is: But if they penetrate, there is great Hazard, for these Parts so shatter'd seldom recover. What we have some time since seen, of a Man discharging his Excrements out of the *Colon* on the Left Side, and heard of other like Wounds of the Stomach, are rather Miracles than the Work of the Chirurgeon. But they were happy that were instrumental in those Cures. If *Celsus* in his Time determined those Wounds mortal made by cutting Weapons, how much more must they be such that are made in our Age by Gun-Shot? Yet Nature, as one saith in his *Vulneribus, s^epe miracula facere solet*, is often as merciful and miraculous in the Cure, as the Blow was cruel.

In order to the Cure, you must begin with the Extraction of the Bullet, lest it sink into the most inward Parts, and there afflict the *Viscera*; as also of the Rags carried in with it, lest they beget Putrefaction. That done, you must reduce the Intestines and *Omentum*, lest they inflate and corrupt. After the Extraction of the extraneous Bodies, you must hasten Digestion, and mitigate the Inflammation.

The Intestines and *Omentum* are disposed to Reduction by warm discutient Fomentations: But if there be not an Opening wide enough, you must enlarge the Wound. If the *Omentum* be corrupted, make a Ligature below that corrupt Part, and cut it off, leaving the End of the Ligature hanging out, till it shall be cast off by Digestion.

If there be *Hæmorrhagia*, you must inject such Medicaments as have a refrigerant and astringent Quality: And those may be *aq. urtic. plantag. spermatic. ranar.* or Red Wine, *cum syr. de ros. sicc. with pulv. bol. Armen. terr. sigill. sang. dracon. aloes, thuris.* Make a Mixture of some of the same Powders, with a new-laid Egg, *ol. mastich. & lumbricor.* and apply it upon a Tent fastened to a Thread, as is before described, then spread the rest upon a Stupe, and lay it over all. But if there be no Flux of Blood, digest as fast as you can.

In order to the Cure, *Fallopious* hath recommended to our Use this following, by the Use whereof he cured Wounds of the Stomach and Intestines. Rx fol. pilo-
sellæ, plantag. rad. tormentill. consolid. maj. flor. hypere-
rici; decoct these in Red Wine, strain it out, and add to the said Liquor, *manna, thuris, ol. mastich, resin. abiet. terebinth. Cypriæ, croci & vermic. terrest. an. q. s. fiat Sarcoticum S. A.*

In all these Wounds of the Belly I have used such like Medicaments as I have offered unto you, and applied to the Wound itself Digestives, as in Simple Gunshot, and endeavoured, by good Fomentations, Embrocations, and Cataplasms, to preserve the natural Warmth of the Part.

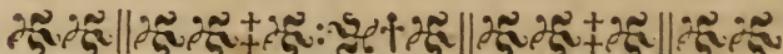
In Wounds of the Kidneys, you must inject such Medicaments as have an absterptive and drying Quality; as, *the Kidneys rad. consolid. irid. aristoloch. rot. also myrtill. caud. equin. plantag.*

plantag. balauſt; decoct these in *aq. chalybeat*. adding afterwards some Red Wine and *syr. de roſ. ſicc.* thereto. Then drefs up the Wound with a Digestive, *ex terebinth. cum integr. ovo*, with a little *terra ſigill. thus* and Māſtich, and embrocate with *ol. hyperici*, applying *empl. Diachalcit.* malax'd with *ol. roſ.* or a Cataplasm, *ex far. hord. fabar. & orobi*, decocted in Oxymel, and made up with a new-laid Egg and *ol. roſ.*

Wounds of the Liver, Spleen, &c. If the Liver or Spleen be wounded, there will be a great Flux of Blood: In which Case I offer this to you: Rx *plantag. pentaphyll. polygon. millefol. myrtill. roſ. rubr.* decoct these in chalybeat Water. You may use it as an Injection, with an Addition of *syr. de roſ. ſicc.* or you may add to it, *pulv. thuris ſang. dracon. bol. Armen. acacia*, and so it may be applied, as a Liniment, upon Tents or Pledgits.

Thus you are to drefs all the Wounds in the particular Parts of the Belly.

The Wounds of the Womb are accounted deadly, the very least of them, and so are all the above-said, made by Gun-Shot; yet you are to proceed in the universal Regimen, and with Clysters, Bleeding, and good Vulneraries, endeavour to dispose the Parts to Sanity.



C H A P. VIII.

Of Gun-Shot Wounds in the Thorax.

AMongſt the principal Parts which are ſubject to Gun-Shot, the middle *Venter*, or *Thorax*, is reckoned, with the Parts contained in it, viz. the Heart, Lungs, great Artery and Veffels, with the *Mediaſtinum*.

Difference. These Wounds are diſtinguished as thoſe of the inferior *Venter*. Sometimes the Wounds are only of the external Parts, without penetrating into the Breast; other times they penetrate thro' the Ribs and *Pleura*: In which latter

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ter Case the principal *Viscera* are wounded, or not wounded.

If the Wound do not penetrate into the Cavity of the *Not pene-*
Breast, but is only in the muscular Flesh, it must be *treating*
cured as Wounds in the fleshy Parts. If there be a
Fracture with it, it must be treated as a Wound with
Fracture, taking Care to extract the broken Bones, lest
they prick the *Pleura*, and cause Inflammation:

But if the Bullet hath penetrated deep into the Ca- *Penetrat-*
vity, it may be discerned by the passing forth of the *ing Signs.*
Air with Noise: There will also follow a Flux of Blood
by the Wound, or Mouth, or by both; unless the
Blood fall down upon the *Diaphragma*; and then, the
Difficulty of Breathing, and such like Symptoms, will
demonstrate its Penetration. And if the Lungs be
wounded, there will be a Cough, with Difficulty of
Breathing, and frequent Sighing. If there be an Effusion
of Blood, it will, according as it is much or little, flow
forth of the Wound, or be cough'd up, sometimes both:
The Patient will incline to lie much upon the Wound.
If the Heart be hurt, the Blood floweth impetuously,
and is reeking hot, their Spirits sink, and cold Sweats
bedewing their Face, foreshew their approaching
Death.

The wounded *Diaphragma* is accompanied with Diffi-
culty of Breathing, also a Hoarseness, with great Pain
about the false Ribs; the *Diaphragma* is drawn upward,
and the Spine is affected.

If the great Vein or Artery be hurt, a terrible Flux
of Blood follows. If it flow from the Right-Side, the
Cava is hurt; but if from the left Side, we suppose it
the Artery. You will discover it by its Saltation and
florid Colour. If the *Porta* be wounded, the Patient
dies at the Instant; and so he doth of all the rest. If
the *Spinalis medulla* be wounded, the Nerves are re-
solved, and a Palsy follows, but more immediately in
the Part under the Wound.

Almost all these Wounds, made by Gun-Shot, are
mortal; but it is not consistent with Religion or
Humanity, to leave such People without Help: For
sometimes we haply prolong the Life of some of them,
and now and then cure one.

I shall therefore proceed to deliver you what concerns their Cure, both as to the internal Remedies given by the Mouth, and to those which relate externally to the Wounds.

In the first Place, you must make Extraction of the Bullets, and other extraneous Bodies, Shivers of Bonnes, &c. to give way for the Discharge of Blood and Matter contained in the Cavity of the *Thorax*; then dress the Wound with a Tent dipt in this or the like : Rx bol. *Armen. corn. cerv. ust. ol. ros. & sambuc. farin. volatil. cum ovo. integr. Mist.* Spread a Compress with some of the same, and apply it over the Wound. If the Blood stop not by this Dressing, let Blood in the Arm, and repeat it as often as you see Cause, applying some of the Astringents set down in the preceding Chapters. Or you may inject some Astringent Decoctions, which is otherwise than was advised in Wounds made by Puncture : For in Gun-Shot Wounds the Orifice is wide enough for the Injection to return out again, insomuch that not only the astrictive Intentions ought to be pursued, but also the deterseive, here being Loss of Substance. Therefore, in case of Bleeding, you may inject a Decoction of *fol. plantag. ulmi, urticæ, vincæ pervincæ, ros. rubr. fol. myrtill. in aq. germ. querc.* adding a little bol. *Armen.* and syr. de *sympht.* Or, for present Occasion, use Red Wine, it being excellently good in such bleeding Wounds, either given inwardly by the Mouth, or cast in by a Syringe. Having thus stopt the Blood, you are to digest the Wound with such like : Rx *terebinth. lot. in decoct. bord. 3ij. pulv. thuris, myrrhæ, an. 3ij. sem. fœnugr. pulv. 3j. ol. hyperici, q. s.* Arm short Tents with some of it ; then apply over it a Pledgit with some of the same, or with such Suppuratives as in Simple Gun-Shot Wounds are prescribed, and embrocate the Breast and Parts about with a Mixture of *ol. amygdal. dulc. lumbri. and unguent. dialthæcæ,* applying over all, an *empl. diachyl. simpl. malaxed in* some of the same. After Digestion you will find it necessary to deterge and incarn. It is not material, whether the Deterision be made by Injection or Unguent, there may be Use for both ; to which Purpose I have set you down both Sorts, and shall begin with an Injection, as supposing the Matter may thereby be disposed

to discharge by the Wound. The milder may be a Decoction of *pilosella*, with *mel. ros.* If stronger be needed, Rx extract. scord. dissolved in *vino albo*; or, Rx fol. *pilosellæ*, caud. *equin.* *plantag.* *tormentill.* *consolid.* *aristoloch.* rot. rad. *iris* & *sarcocoll.* boil these in *aq. font.* adding Wine thereto, with *mel. ros.* q. s. The Unguent may be this following Mundificative: Rx *terebinth.* ʒij. *farin. hord. cibrat.* ʒj. *thuris, sarcocoll. rad. iris,* an. ʒij. *mellis ros.* ʒiiij. *Misc. S. A.* and dress the Wounds in the fleshy Parts with the same. The Wound deterged, incarn and cicatrize as is said in other Wounds; but keep a *Cannula* in it until it cease to run. *Celsus* proposes, that in all these internal Wounds, the external Parts be vesicated, to make more powerful Revulsion from within: And the Medicament he Proposes thereto, is, *Sal bene contritus cum cerato mixtus, quia leviter cutim erodit, eoque impetum materiæ quo pulmo vexatur evocat.* This his proposal may be proper in Wounds made by sharp Weapons, as by Arrows, &c. But here in these Wounds there is Vexation enough outwardly to make a Revulsion, if that signified any thing. In the dressing these, you must be careful to cut off the Sloughs without, lest from them a stinking Gleet distil upon the *Viscera* within. In order to the Cure, Clysters are also required to keep the Body open: And the more temperate Pectoral Decoctions are here proper, such as that in the *London Dispensatory*. To them may be added, syr. *violar.* de *cichor.* de *liquiritia,* *jujub.* capill. *ven.* de *sympyto*, and such Lohochs as may take off the Harshnes in the *Aspera arteria.* Their Diet ought to be slender, and their Drink medicated Ale, or *Hydromel*, wherein Pectorals have been decocted, are proper in all these Wounds; so are also Emulsions: And after the Fever and such like Accidents are diminished, Asses and Goats Milk may be necessary; yea, a Diet of Cows-Milk alone, or mixed with distilled Milks, and sweetened with Conserve of Roses. But this will be Work for the Physician, when they come Ashoar. Many Instances may be given of Gun-Shot in the Breast: But few do recover that are shot into the Lungs.

Observat.

At the Battle of Worcester, there was one brought to us shot with a Musket-Bullet thro' one Side of the Sternum, which passed out between two of the Ribs on the other Side, without any visible Symptom of Danger. We dress'd the Wounds with a Digestive dipt in *ol. lumbri-* *c.* warm, and kept the lower Orifice between the Ribs open, for Discharge of the Matter, it being the depending Orifice. He was let Blood, and prescribed Pectorals, &c. as Occasion offered. His Wound digested, and was afterwards deterged with *mel. ros.* &c. After our Defeat, he was dressed by Will. Clarke now of Bridgenorth; and, as I have been since informed by him, was concealed by some House-keeper, until he made his Escape.

Observat.

From the Defeat of the Scotch Army near Dunbar, there came many of the wounded to St. John's Town, and amongst them there were several wounded into the Breast. They who were so shot as to have the Ribs broken, were in extreme Pain from the Shivers. Whereas the rest, whose Bones were not hurt, had scarce any Pain at all, but what proceeded from Difficulty of Breathing, they all coughing up a stinking Saries, both before and after the Separation of the Sloughs. One of them cough'd a very great Proportion daily, of thin Matter, of a brown Colour and rank Smell. None but this died under my Hands; the rest, after some while, retiring to their Homes, where (as I have often heard them say) their Leeches performed great Cures, by virtue of some Plants which they gave internally, and which, with Fats, they made Balsams of. Yet I believe this Man died tabid.

C H A P. IX.

Of Symptoms of Gun-Shot, (omitted in the Fourth Chapter).

THE Symptoms attending Gun-Shot, are, Pain, *Phlegmon*, *Erysipelas*, Fever, *Delirium*, *Syncope*, Gangrene, Convulsion, and Palsy. The Pain occasions Inflammation, whether it be *Phlegmon* or *Erysipelas*, of both which I have elsewhere purposely treated. But that of Gangrene I thought fit should accompany Gun-Shot, they of all Wounds being most subject to it. The Fever is symptomatical, so is the *Delirium*, and will go off with the Pain; but may, with the fore-mentioned Inflammations, be relieved by Bleeding and lenient Purgatives, such as I have mentioned. And to fortify the Spirits against Fainting, which proceeds from putrid Vapours affecting the Heart, there are Cordials and *Epithemata* already prescribed: So that there remains only Convulsion and Palsy to be here treated of.

Convulsion is, an involuntary Contraction of the Nerves *Convulsion* to their Original, by which Contraction the Member is also drawn up; and it is said to be caused by Repletion and Inanition. In this our Case it ariseth from putrid Vapours, or acrid Matter, offending the Nerves, which is often found in these Wounds. The Part affected is the Brain, which being thus provok'd, causeth an involuntary Contraction and Rigidity in Parts dismembred, as near the Knee or Shoulder. There the Contraction cannot be discerned but by a Trembling, which Trembling is usually attended by a Convulsion of the Joints. It likewise follows upon great Inflammation, especially in the nervous Parts. The Prognostick here is always fatal, a Convulsion upon a Wound being the Fore-runner of Death.

In the Wars, I was called to see a poor Soldier, who *Observat.* had his Arm shot off near the Shoulder. The bruised

and shattered Stump, seemed to his Chirurgeon to be gangrened, and accordingly he dressed him with *Ægyptiac.* as a Gangrene : From which sharp Dressings the Wound gleeted, and, by reason of the Pain, inflamed. He had roared some Days thro' the Vehemency of that Pain. When I came to him, I saw a great Trembling of the Part, and a frequent Twitching upwards, of the Tendons and muscular Flesh in the Stump ; also the Flesh in the whole Stump was of a whitish Colour, as if it had been scalded. I dress'd him up with Anodynes, as *Liniment. Arcei cum vitell. ovi,* and fomented the Part with *fol. malvar. violar. thaps. barbat.* decocted in Milk, embrocating it *cum ol. lumbric.* & *ex ped. bovinis*, and applied *empl. diapalmæ cum succis* over all ; then anointed the Parts about, as the Neck and Spine, with *unguent. nervin.* I also blistered the Legs and Thighs, but was too late. He died howling.

Palsy.

Paralysis is generally defined, a Privation of Sense or Motion, or both, in some Part or Parts, and affects the Brain and *Spinalis medulla.* But in Palsies which arise from Wounds, the Parts immediately affected, are the Nerves of that Place only. This doth not take away the Life of the Patient, tho' it may sometimes threaten a Mortification, through Defect of natural Heat in the Member.

Observat.

In a Sea-Fight, an *Irish* Mariner having discharged his Gun, which was Honey-comb'd, and loading it suddenly again, while he was ramming in a Cartridge, the Powder took Fire, and shot the Rammer out of his Hand, tearing the Palm of his Hand, also some of his Thumb and Fingers. The Wound was not considerable, but the Force of the Blow extinguished both Sense and Motion of the Member. I dressed him up with our common Suppurative, (of which at such times we had a great Quantity ready) and applied over all a common Restrictive, and so rowled it up, there being then no Time for bleeding him. But after the Fight, I let him Blood, and a Day or two after purged him, then fomented and embrocated the Member with *ol. lumbric. cham. anethi. lilio. unguent. nervin.* and did all that we Chirurgeons of the Squadron thought fitting ; but without Success. One Night, after he was cured of his Wound, lying asleep in his Hammock, he wa wakened

wakened by the Wet he felt upon his Breast and Belly; and getting up to a Candle, he found the Dressing upon his Hand all bloody, as also the Place whereon it lay. I being called, took off his greazy Dressings, and found the Palm of his Hand and Fingers gnaw'd by Rats. They had eaten thro' the oiled Cloths, and had gnaw'd his Hand more, if he had not wakened by the Trickling of his Blood. I dress'd his Wound with Digestives to hasten Suppuration, supposing the Discharge of Matter might contribute to his Recovery. After I had cured them, I made him a Fontanel in that Arm, and bathed the Member frequently, also cupped and scarified it; and afterwards applied Plasters of Pitch, to stir up a Heat in the Member. He was a young Man, and otherwise of a strong Constitution, and was not over solicitous to have it cured, as designing to make some Profit by it. To which Purpose he took an Opportunity of landing, and hastened away to *Madrid*; where, having gotten some Reward for his Service, he returned to the Navy, and had more Use of his Arm.

Paralysis doth often happen in great Contusions and Luxations; of which more elsewhere.





A N
APPENDIX
To the T R E A T I S E of
Gun-Shot W O U N D S.

To the R E A D E R.

HAVING thus finished the Treatise of Wounds, I considered with my self that my Design was to help the Sea-Chirurgeons, who seldom trouble their Cabins with many Books. I therefore thought it convenient to make this as comprehensive for their Use as I could, by comprising in it all those Things which may easily be foreseen to be of Use to them in other Cases besides Wounds. We know by our Experience, that Burning by Gun-Powder and other Materials, do too frequently happen at Sea ; and also, by ill Dressings of Wounds, Gangrenes and Fistulæ arise, and that much the sooner, if broken Bones, especially those with Wounds, be not well brought together, and so held. All which Matter we occasionally handled in the foregoing Work : Yet not so much, but that, for their farther Instruction, I thought it requisite to anticipate something of other Discourses, which I intend for the Press, by the following Appendix, which, if well perused, may perfect the Chirurgeon in what remains to be known concerning Wounds, and save him the Labour of reading many Authors.

C H A P.



C H A P. I.

De Ambustis : *Or, Of Burns with Gun-Powder, &c.*

FORasmuch as it often happens, that in close Fights at Sea, Men are sometimes burnt by Gun-powder by their Enemies, and by various Accidents amongst themselves ; I shall therefore deliver to you the most plain Way of curing them. For, however People cry, 'Tis nothing to cure a Burn ; yet by what I have seen of these Cures from Country or City, they are often very ill performed. Whether they are burnt by Gun-powder, or any other Way, their Cure is much alike, they only differing *secundum magis & minus*. Only, if they be burnt with Gun-powder, they must pick out the Powder first, else they will carry the same blue Mark, if it be in their Faces, which some People use to do in their Hands and Arms, which I have often been employed to take out, when done wantonly in their Youth ; but could never remove them otherwise than by taking off the Skin.

If the Burn be superficial, it raiseth the *Cuticula* up in Blisters : If it go deeper into the Skin, it causes an Escar : If it burn deeper into the Flesh, the Force of the Fire makes a hard Crust with a Contraction. In all these the Pain is excessive.

Once, as I was dressing a gangrened Leg with warm Spirits of *Terebinth*, &c. Mr. *Arris* and Mr. *Hollyer* Chirurgeons, and others, being close about me, and I upon my Knees, the Candle, being too near the hot Spirits, catch'd the Flame, and burnt my Thumb and Fingers before I could get free from those behind me, to throw it into the Chimney, which was some Distance off. I felt much more Pain for the while in the superficial Scalding, than where it was burnt to an Escar.

The

Cure of a
Burn.

Refrige-
rants.

Calefac-
tion.

Regimen
in Burns.

The Indications of Cure are of two Kinds, viz. either by Refrigerants bathe or anoint the Part, until the Heat be off, and the Escar separated, and then to digest and cicatrize; or by calefactive Medicaments to relax the Skin, and resolve and dissipate it, which by Accident will asswage the Heat and Burning. The Refrigerants are, *aq. solani*, *plantag. hyoscyam. lac. ebutyratum*, and all the cooling Juices and Unguent, as, *unguent. album*, *nutritum*, *populneum*, *rosat.* &c. These must be used warm, until the Heat and Pain cease, or the Fire be taken out, (as the common Expression is) else they will rather cause Pain. Hot Medicaments asswage the fiery Heat and Pain by Rarefaction: Which, in the first Place, may be done by the holding a burning hot Iron or Fire to the Part: So whilst the Fire calls forth that Fire it made, it becomes its *Alexiterium*. But the common Remedy is, to apply Salt and an Onion beaten together. But this is not to be done after the Blisters are risen, nor by any Means where the Part is raw; for so you will exasperate the Pain, and increase the Inflammation. There are many other things do extinguish the Fire. *Fimus equinus* doth it, fried in *ol. nucum*, *uvæ immaturæ*, *sambucus*, and *ebulus in oleo coct.* *calx viva extint.* & cum *unguent. rosaceo mixta ad consist. unguenti.* These are to be renewed often, until the Pain and Heat be off, which they in few Days effect. If these Applications do not prevent the rising of *Vesiculae*, you must cut them as they rise, lest by their Erosion they make hollow Ulcers, and inflame with sharp Pains, Fever, &c. But where they are burnt to a Crust or Escar, you must hasten its Fall with Emollients, then digest, incarn, and cicatrize.

Here is required Bleeding and Evacuation by Lenients: But if there be *Cacochymia*, you must purge more powerfully. A spare Diet is requisite, with all other Regulation proportionably, according as the Burn is greater or less. I shall give you, for your farther Information, two remarkable Instances of Burns: The first in the Wars, occasioned by Accident, thus:

I. Obser-
vation of a
Burn with
Gun-pow-
der.

A Soldier, in the Time of Service, being in the Fort-Royal at Worcester, hastily fetched his Bonnet full of Gun-powder; and, whilst he was filling his Bandeliers, another

another Soldier carelessly bestrides it, to make a Shot at one of the Enemies which he saw lying *Perdue*. In firing his Musket, a Spark flew out of the Pan, and gave Fire to the Powder underneath him, and grievously burned the Hands, Arms, Breast, Neck, and Face of him that was filling his Bandeliers. And as to himself, he likewise was burned and scorched in all the upper Part of his Thighs, *Scrotum*, the Muscles of the *Abdomen*, and the Coats of the Testicles to the *Erythroides*, so that the Cremasters were visible. And indeed it was to be feared, that, when the Escar should cast off from his Belly, his Bowels would have tumbled out. We dress'd the several Parts of them both with *mel saponis*, and embrocated the Parts about *cum ol. ros & albumine ovor.* beat together, and let them Blood. I did not see the Issue: But *William Clarke*, who was then one of my Servants, and assisted me in the dressing them, staid there, and attended their Cure, after the Defeat of our Army. And he lately told me, he cured the latter of these with *unguent. tutiae, &c.* and the former made his Escape out of Town.

A young Gentleman of about ten Years of Age, 2. Observed at a School a few Miles off, the Evening before ^{vation of} the Fifth of November, having filled his Right Pocket ^{Burn with} full of Squibs and Crackers, threw one of them into the ^{Gun-pow-} Chimney amongst the Embers. It took Fire, but whe-
ther it scattered the Fire, and some Sparks of that flew into his Pocket, or whether it was the Cracker; but those in his Pocket took Fire also, and his Cloths burnt. At the Sight whereof his little Chamber-Fellow ran out for Help. In his Absence, a little Boy from some other Apartment took the Alarm, came in, and seeing his School-fellow in a Flame, catch'd up a Basin of Water, and threw it upon him; then ran away for Help: Others came in, and rescued him out of his burnt Cloths. A neighbouring Chirurgeon was sent for, who dressed him. The next Day they brought the Patient to Town. I found him burnt into the Flesh from a Hand's Breadth below that Arm-Pit down that Side, with Part of his Belly, and from thence it spread down to the *Os Ilion* and *Gluecus*, and along the Thigh almost to the Knee. And by endeavouring to free his Pocket of the Crackers, he also burnt his Hand from the Fingers Ends,

Ends, along the Side of his Arm, to his Elbow-joint. The Parts which were burnt to an Escar, I anointed with *mell. cum succo cepar. & pulv. iridis*, mixt, and fomented the Parts about with a Decoction of *hyoscyam. malvar. solan. violar. sem. cydon. psyllii*, adding to it a third Part of *lac. ebutyratum*, and embrocated the other Parts with *unguent. stramon.* He should have been let Blood, but would not. Clysters were admitted, and Pearl Juleps and Ptisans prescribed, his Fever being very great, by reason of the Pain. As the Blisters arose we snipt them. Those which were raw, I dress'd with fine Lawn dipt in the aforesaid Decoction, and with a Feather dipt in *unguent. de stramon.* mixt with *ol. amygd. dulc.* anointed the Lawns; by which Means those Places which were superficially burned, healed. As the Parts deeper burnt threw off their Escars, I digested them with the Yolk of an Egg, and a little *terebinth. lot. in aq. solani*, adding some *farin. bord.* finely searsed *cum ol. amygdal. dulc.* Upon others I applied *unguent. diapomphol.* and anointed the fretted Edges with *unguent. de stramon.* To others I used *unguent. album camph.* mixed *cum albumine ovi.* Thus each Part required to be particularly considered, and special Care was taken, that no Matter should be any where penn'd in. In these large Burnings

Several Indications in a large Burn. there are required Variety of Indications at one and the same time. Some require Anodynes, others Detergents and Digestion, others Desiccants. Some of the Parts require to be dress'd twice a Day; others but once. Some of them I dress'd with this Unguent: R *ol. sambuc. ℥vj. cerea ʒij. litharg. aur. ʒij. cerussæ ʒj. calcis lot. ʒvj. thuris & sarcocollæ, an. ʒij. fiat unguentum, S. A.* Upon some of these Lawns I laid, afterwards, Pledgits dipt in a Solution of *troch. alb. Rhaf.* made in a Decoc-tion, *equiset. ros. rub. & summit. rubi*, to cicatrize them. Thus I happily cicatrized this young Gentleman's Ulcers, even and smooth, without the least Inequality, nothing remaining, but the Red Colour, to make it discernable.

And I must tell you, in these great Ulcers, it will require your Care, that no *Hypersarcosis* grow upon them, for thereby the *Cicatrices* will be deformed. I have had some Persons of good Quality come to me so deformed with these, that they have suspected them to be wenny,
and

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and where they have happened upon Womens Breasts, they have supposed them cancerous. In others, from ill Chirurgery, the loose Flesh hath grown so high and callous, that one of them who came into my Hands, required to be burnt again, in order to his Cure. In the Face there is a special Care to be had, as also in the Neck and Breasts of the Female Sex. A great Care Medicines must be had likewise of the Eyes, that they be not for Eyes daubed with greasy Medicaments, and that the Lids be *burned*. not dress'd with too drying ones, lest they contract and make a Blearedness. In the Cure of the Eyes you may use Pigeons Blood, Breast-Milk, *aq. solani, plantag. ros. poma, sem. cydon. faenugr. troch. alb. Rhaf. tutia, lap. calam. thus, sarcocoll.* wash'd or not wash'd. I have seen the Ears, for want of Care, adhering to the Scalp, also the Fingers to one another, and in others close contracted to the Palm with hard *Callus*. In that Case of the Ear, I divided the *Callus* by Incision, and applied soft Bits of Linen dipp'd in *aq. spermat. ranar.* between the Scalp and lower Part of it, which was rumpled up : Afterwards I rubbed the unequal *Callus* with the Caustick-Stone ; and as the Escars separated, I cicatrized them with the Vitriol-Stone, *unguent. deficcat. rub. &c.* and left the Part in its natural Shape. Where the Fingers have been all grown to one another, almost to the middle Joints, I have separated them by Cissars and Knife, and afterwards by the Caustick-Stone, rubbed the *Cicatrices* off, and healed them smooth.

A Boy came out of the Country, with all the Fingers of his Right Hand close contracted. I cut the *Cicatrix* of each Finger, and caused a Rowler of Wood to be placed under his crooked Fingers, which being carried with Bars to the inward Part of his Wrist, and fastened by Screws, thrust the Rowl gradually forward, till it had born all the Fingers before it, and by a complete Extension, restored them to their former Liberty. The Wrists and other Joints would be subject to the same Inconveniencies, if they were not prevented by the knowing Artist, without whose Help the best Medicaments signify little.

3. Observation of
Fingers
burnt.



C H A P. II.

Of Gangrene and Sphacelus.

THE most cruel Symptoms that attend Gun-Shot, and great contused Wounds, are, *Gangræna* and *Sphacelus*.

Definition. Gangrene is a Tendency to Mortification: It invades the softer Parts, as the Skin, Flesh, &c. and is the Beginning of a *Sphacelus*.

Sphacelus is a perfect Mortification, with the Extinction of the Native Heat and Privation of Sense, not only in the Skin, Flesh, Nerve, Artery, but the very Bones.

Difference. They differ from one another, as the Mortification is more or less.

Causes. The Causes of Gangrene are various, *viz.* whatsoever destroyeth the natural Heat, as, Interception of the Motion of the Blood, by over-strict Bandage in Wounds and Amputations, want of timely extracting of extraneous Bodies in Gun-Shot, &c. from whence Pain and Fluxion do arise; so Excess of Cold in hard Winters, also in Old Age, and the like. A Gangrene doth arise also in Phlegmons, thro' the unseasonable Application of over-cold Medicaments; or for want of timely Digestion; or by Excess of Heat, such as becometh caustical, as we find in Carbuncles, and all Escars. But that which most of all contributes to it, is, the Degeneration of Humours in unsound Bodies: In some of which, not only all great Operations, but even the Application of a Caustick, cutting a Corn, or paring a Nail of a Toe to the Quick, will endanger Mortification. Some I have seen (you may call them Scorbutilical Persons if you please) who, upon the Appearance only of a small black Spot on the Foot, without Tumour, have suffered a very quick unavoidable Mortification. But I would not have you therefore conclude every Scorbutilical Spot

a Gan-

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a Gangrene : For this latter lies dry in the Skin, without either Inflammation or Pain.

In one of the abovesaid Cases, where the Gangrene was stopt by the speedy Assistance of Art, an Apoplexy follow'd in a few Days after: Of which more anon.

The Signs of a Gangrene are, Change of the natural *Signs*. Colour in the Skin to a pale livid, with Diminution of Tumour; Blisters also arise, and the Part turneth black soon after. In Wounds, the Lips sink and are flaccid; a Gleet followeth, and the Flesh within withers, also the Pulse and Sense in the Part do both languish.

A Person having been shot in the Arm, and the *Observat.* Wound undigested, I being consulted, advised the laying open of the Wound, and Extraction of the Bullet, Rags, &c. but was over-rul'd by others, and it was deferred to farther Consideration. Two Days after I visited the Patient, and ask'd the Chirurgeon, whether he had laid open the Wound? He replied, There was no Need, for he could turn his Finger in it, and pull out the Bullet and Rags, if it was necessary. As I was going out of the House, I met the Physician, who enquiring of me the Patient's Health, I replied, That the Chirurgeon had unwittingly given me the certain Sign of his Death: For, *in magnis vulneribus & pravis, si Tumores non apparent, ingens malum*: That was a great Wound, and not being digested, should have been accompanied with Fluxion and Inflammation; the Lips should have been full, and the Orifice contracted: But on the contrary, the Heat was decayed, the Lips were lank, without Sense, and at that time sphacelated: A Day or two after he died, too certainly justifying my Prognostick.

Sphacelus is distinguished from a Gangrene by the total Corruption and Stink, it being also insensible both of Knife and Fire. If a Gangrene proceed from Pain, the Tumour and preceding Inflammation will shew it, and the sudden sinking of that Tumour is the Beginning of the Gangrene. If the Gangrene be from Cold, the Part is first benumm'd, then accompanied with a prickling Pain, also a Redness, which by Degrees turneth black, and Horror and Rigour seizeth upon the Patient. If it be from Interception of the Spirits, by reason of over-strict Bandage, there is neither Fluxion nor Pain,

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but a Flaccidity joined with an Insensibility in the Part. If it be from old Age, the Patient is lean, Nature visibly decayed, his Legs and other Extremities are first seized, and the Part is most commonly without **Tumour**.

Prognostick All Gangrenes are dangerous, as threatening the Life of the Patient they affect. Those that begin in the external Parts, by reason of Inflammation, are of least Danger, if the Habit of Body be tolerably good, and the Mortification timely treated. Those that arise deep within the Wound from Gun-shot or fractured Bones are extremely hazardous, especially if they be in or near the Joints, tho' the Habit of Body be good.

Gangrenes arising from Parts abounding with too much Humidity, are in great Danger ; for thereby the natural Heat is soon overcome : For which Reason, Gangrenes in very fat and hydroical Bodies, especially in the latter, are rarely extinguished : So also, those arising from an internal Cauic, are exceedingly more dangerous than those that arise from an accidental. Yet in all these there are some Hopes of Cure ; but in *Sphacelus* there is no Remedy, save only by a speedy Separation of the sphacelated Part : For if any of it remain, it soon creepeth up by the Nerves, &c. and infecteth the whole Member, and is accompanied with Watching, Raving, frequent Faintings, Convulsions, Hiccough, and cold Sweats ; which foreshew the Patient's approaching Death. See the Treatise of *Tumours*.

Cure. In the Cures of Gangrenes, I shall begin my Discourse of that which ariseth from Pain, with Flux of Humours and Inflammation. These most frequently attend great Contusions, Gun-shot Wounds, &c. and by suffocating the native Heat, produce Mortification. In which Cases a cooling and slender Diet ought to be observed : The Humours abounding in the Body must be evacuated by Bleeding and Purging : Revulsion ought also to be made, to avert the Humours from flowing to the diseased Parts. For the rational performing of which, I refer you to the Chapter of a *Phlegmon*, in the Treatise of *Tumours*.

Cordials and Epithems are also necessary to resist the Putrefaction, and strengthen the Vitals, from what Cause soever the Gangrene ariseth. For your Choice of which,

I refer

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I refer you to the Chapter of a Carbuncle, which is another Sort of Gangrene. Having thus provided in general, we shall in the next Place consider the Part affected, whether it be only a Tumour, or a Wound with a Tumour, &c. In which latter, if the Tumour and Inflammation have been very great, and it change Colour suddenly, and sink, the Pain continuing, you may conclude a Gangrene beginning. And if there be a Wound or Abscess, and that Wound, &c. grow more painful, if the Flesh also lose its Ruddiness, and look pale and withered, and the Matter change to be thin and gleety, you may suspect it corrupting : In which Case it will be necessary that you scarify to the Quick, and make it bleed freely. By your Patient's sensible Feeling, and by the fresh trickling down of the Blood, you may judge of the Mortification. But if the Gangrene have crept deeper, or arose from the Bottom of the Wound, then scarify accordingly unto the fleshy Parts : And if there be any Abscess lying under the Muscles or Lips of the Wound or Ulcer, let it out. If in making such Scarification, you chance to cut some Vessel, whereby a Flux of Blood happeneth, have a Care you choak not the Heat of the Part, by crowding in Dossils ; for so the Mortification may be increased. To avoid which, I do rather advise the actual Cautery, for thereby you will not only stop the Bleeding, but dry up the Putrefaction. After the Use of it, dress up the Wound as hath been advised in the Chapter of *Burning*. If in scarifying you prick a Nerve or Tendon, you will increase the Gangrene : So you may do, if, by the actual Cautery, you burn them but in Part, or if you apply sharp Medicaments on them when newly hurt by Scarification : For we frequently see great Fluxions arise from little Disturbance of the Nerves and Tendons : Therefore consider well, and if such lie in your Way, you had better cut them off, or burn them thro', than scratch or prick them. For the Confirmation hereof, you may see some Instances in the Cure of Ulcers amongst the Nerves and Tendons, in the Treatise *De Strumis*. Whilst I was writing this, I cut off some of them in one Patient; they lying over the carious Bones, would not admit of the Coverture of a Pledgit, without grievous Pain ; but those, once divided, the Ulcer

grew easy. But if you meet with none of these Accidents, then, after Scarification, cleanse it of the clotted Blood, by washing it with Brine, a strong Lixivium of Wood-Ashes, or Tincture of Myrrh, &c. and fill up the Scarification with *Merc. precipitat. troch. polydæ, musiæ*, or with Dossils dipt in *ol. Caryophill. terebinth.* &c. actually hot. *Unguent. Ægyptiac.* is also here useful, whether it be that made by the *Pharmacopœia Londoniensis*, or by other Authors, with the Addition of *sal. armoniac. nitr. theriac. camph. &c.* The usual Fomentation is a *Lixivium*, wherein have been boiled *summit absinth. centaur. min. carduus benedict. scordium. vincetoxic. rad. aristoloch. rot. rad. gentian. spir. vini*, or that of *aq. calcis*, with a Solution of *Merc. sublimat.* or *aq. lap. medicament.* Cataplasms are also of Use, ex *far. hord. fabar. lupinor. lentium, pisor, Mithridat, &c.* boiled in a *Lixivium*, with an Addition of Oxymel, &c. While these are applied to the gangrened Part, a good Defensative should be laid upon the Joint or Parts above: Of which you may find Choice in this Book.

In the Dressing of these Mortifications, you ought to consider well in the Application of your Medicaments, that you do not, in the extinguishing one Gangrene, raise another, by the too long Use of sharp Medicaments. Therefore, when you shall feel the Ulcer warm, and find it cease gleeting, it may be reasonable to forbear the Use of them, and to dress it up with warm Digestives, as, *unguent. basilic. cum ol. terebinth. hot*: And after Digestion, deterge with *mundif. ex apio magist.* or such like, according as the Sloughs require; then proceed by Sarcoticks and Epuloticks, as in such Ulcers hath been shewed.

Observation of a Gangrene from strict Bandage.

OF Gangrene from strict Bandage, you may see several Instances in this Book. The Cure differeth not from that of others made by Fluxion; but they are much more hopeful, considering the Cause may be so easily removed by the loosening of the Bandage. I shall give you an Instance here of a fractur'd Leg set in the Country, by one pretending to Bone-settnig. It had been bound up with Splints. About the third Day after, I passing that Way, was desired to see him. The Fracture

ture was of both the Focils of the Left Leg. He had been in great Pain from the time of the Setting : It was extremely swelled from the Knee to the Toes. I saw it was occasioned by the too strait Binding. I therefore loosened the Bandage, and took off the Splints, the Ends of them sticking in the Skin, as also did the two Ligatures which encompassed the Fracture. Many Blisters were raised; not only about the Fracture, but also about the Foot ; some whereof were blue, and others of a dark red Colour. I scarified them, permitted them to bleed, and fomented the Member with Stupes wrung out of hot Milk : By which I gave a Transpiration to the Humours, then dressed the Gangrene Spots with *unguent. basilic.* hot, and applying an Anodyne Cerote over all the Leg, laid it upon a soft Pillow, with *Splenia* of Cloths under it, which I fastened about the fractured Member ; and bringing the Sides of the Pillow close to the Leg, it was supported with much Ease : Then I let the Patient Blood. By this way of Dressing, the Blood circulated, the Pain accordingly diminished, and so did the Swelling, and the gangrened Parts digested off, and healed, by the Application of *unguent. diapompholyg. &c.* After the Diminution of these Accidents, the Leg was dressed up closer, and the fractured Bones united together, according to the Method set down in the Treatise of Fractures, where also you will find a Gangrene arising from Fluxion occasioned by the Shivers of Bones, with the Manner of its Cure.

Of Gangrenes arising from Gun-shot, I have shewed you sufficiently in the preceding Treatise ; and in the Observations of *Phlegmon*, have treated of those rising from Inflammation, to which I refer you ; and shall now give you some arising from other Causes, and first from Fluxion.

A Gentleman of a full Body, having accidentally broken his Shin by a Fall, the Wound inflamed, and grew very painful. It not yielding to their Applications, I Gangrene was fetch'd, and saw the Heat decaying, and Blisters on a contus. rising about the Lips of the Wound, also a thin *Ichor sed Wound.* dropping from the contused Flesh. I cut out the bruised Flesh, scarified the Wound, and dabbed it with *ol. terebinth.* then filled it up with *Præcipitate*, and applied

unguent. basil. warm, with some of the said Oil, and a Cataplasm over all, of Wheaten-bread Crumbs, decocted in Brandy, with the Addition of Saffron, Yolks of Eggs, and *mell. communis*, then let him blood, prescrib'd a Clyster that Afternoon, and laid him to Bed with an Anodyne Draught. The next Day I came better provided; but in taking off the Dressings, I saw the Wound dry, and felt it warm, and took Notice of a small Escar, made by the former Application, over it. The Lips of the Wound inclined to a Digestion. I fomented it, and dressed it up with *unguent. basilic. cum ol. terebinth.* and repeated the Use of the Cataplasm; by which Dressings the Wound digested, and the Parts above recovered their natural Heat, and he was cured by Deteritives, Sarcoticks, &c. as a hollow Ulcer.

3. Observa-
tion of a
gangrened
Leg.

A Woman came out of the Country to me, with an Ulcer in her Leg. It had been of a long Continuance, and by reason of her Journey, it inflamed and swelled. When I saw it, the Heat was decaying, and the Tumour was sinking; Blisters were risen near the Lips, and the Skin, under some of them, was of a Purple, and under others of a blue Colour. The Ulcer itself being putrifid, I scarified it, and the Parts about, so far as I thought necessary, permitting them to bleed freely, and thrust out the rotten Flesh; then I fomented them with Brine, sprinkled the Scarifications with *Merc. præcip.* and dressed up the Ulcer with Dossils dipt in a Solution of *unguent. Egyptiac. in spir. vini*, to which I added some of the said Præcipitate, and applied a Cataplasm of *medull. panis tritic. pulv. summit. absinth. flor. centaur. rutæ, scord. cham.* decocted in Brandy-Wine. After I had thus dress'd her, I let her blood, and disposed her to Rest, with a Cordial Draught. Her Body was, the next Day, made soluble by Clysters, and afterwards by lenient Purgatives.

At the next Dressing I was provided with a Fomentation and Cataplasm, as it is proposed in the Method of Cure. I scarified again the Lips and Parts about, and design'd as much to the Ulcer; but in taking off the Dressings, I felt it warm, and a kind of Escar made by the aforesaid Dressing; I therefore dress'd it with *unguent. basilic. and ol. terebinth.* hot, and applied the Cataplasm over all. By these Applications the Ulcer and Parts

Parts about were restored to their native Heat, and the Sore digested, and afterwards healed, with Sarcoticks, as is usual in such like Ulcers.

A Lady, aged about sixty-three Years, of a very fat gross Body, was seized with an Apoplectick Fit, which afterward terminated in some kind of Lethargy, with gangrened Loss of Memory. During which, she lying in Bed, and leaning for the most part on her Elbow, bruised it, and at length the Putrefaction reaching to the Skin, it inflamed, and seemed to have Matter. Some Pretenders to Chirurgery, judging it a simple Apostemation, thought it not worthy the consulting a Chirurgeon, but opened it, and put in it a Tent, with *basilicon*, and left it to an Apothecary to dress by their Direction, not forbidding the Patient to ly upon it. It being thus dress'd, the Putrefaction within increased, and spread up towards that *Axilla*, and she died of that Mortification before it was discovered by them; so that the Chirurgeon came in only time enough to embalm her.

A Gentleman of about sixty Years of Age, having been long diseased with an Ulcer in his Right Leg about the Ancle, came up to Town, and sent for me. The *sphacelated* Lips of the Ulcer were without Tumour or Heat; the *Leg.* Flesh within the Ulcer was livid, and in some Parts of a blackish Colour, and discharged a gleety Matter. Indeed there were all the Signs of a *Sphacelus*; yet the Patient talk'd of going abroad the next Morning; and by his other Discourse, seem'd to be somewhat delirious: I fomented his Leg with a Stupe wrung hot out of *Spanisb* Wine; and whilst I provided other Dressings, I prevailed with him to send for an eminent Physician dwelling near his Lodging, to whom I represented the Condition of the Ulcer, and undressed it in his Presence, scarifying the Lips and Parts within, with *ol. terebinth.* hot, and applied *Merc. præcipitat.* &c. with a Cataplasm *è medull. panis tritic. pulv. summit. absinth.* with *scord.* &c. decocted in Brandy-Wine. The next Day a Consultation was held of two Physicians, Mr. *Arris* and Mr. *Hollyier*, Chirurgeons, with myself. We took off the Dressings, and found the Ulcer sphacelated, but not much spread externally. The Patient had reft ill, and was delirious, and his Pulse weak. We cari-fied the Lips and Ulcer, and permitted them to bleed;

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then fomented the Member, and dressed the Mortification with *Merc. præcipitat.* and applied a Cataplasm, as above prescribed. We continued our Endeavours daily, but the Venom spread up and down that Side of the Foot, amongst the Bones and Tendons. The Physicians prescribed Cordials, &c. but his *Delirium*, &c. increased, and he died before it had encompassed any Part of the Leg.

Cold extinguisheth the natural Heat of a Part, and frequently happens to poor People travelling in Frost and Snow. Some Instances I have seen of this Gangrene. The Recovery of them is not very difficult, if timely treated; otherwise they sphacelate, as other Gangrenes do. When any particular Part beginneth to decay in its natural Heat, the common Remedy is, to rub it with Snow, and afterwards to foment it with Decoctions of Turneps, or of the hotter Plants, such as are usually found in every Kitchen Garden; then to embrocate it *cum ol. lini, rutæ, aneth.* and *ol. terebinth* mix'd with them, and afterwards to lap it up in woollen Cloths: But if any Part be directly gangrened, we scarify and dress it, as hath been said in the Method of Cure: If the whole Body be over-cooled, the Cure consists in the using Brandy, *aq. vitæ*, and other good Spirits, *theriac.* and Mithridate dissolved in Wine, and laying the Patient by the Fire, but not too near, or putting him into a warm Bed, and disposing him to sweat.

Observation of a Gangrene thro' Old Age.

Of Gangrene, thro' Deficiency of Heat in Old Age, I shall only give you one Instance, and that in a Person of a very great Age; he is yet alive, and kept so, by the great Kindness of a noble Kinsman, with whom he hath a good Chamber well furnished, good Firing, Diet, Attendance. This Gentleman was seized, the last Spring, with a simple Inflammation about the Ankle, without Tumour. Upon Notice thereof, I went the next Day, and saw it turn'd black three Inches in length, and about two in breadth. We fomented the Part with a Decoction of warm Plants, to which we added Brandy; then scarified the Escar, and dabbed it with *ol. terebinth*, and after, dressed it with a Mixture of the same Oil, *cum unguent. basile.* embroccating the Parts about with *ol. lumbricor.* &c. and applied a Plaster *ex theriaca.*

Thus

Thus the Eschar separated, and my Kinsman *Jaq. Wiser-man* dressed and cured it. Before this was cicatrized, the Inside of the other Leg, upon the Ankle-Joint, inflamed as largely, and turned black: But by the same Way of Dressing, a Separation was made of that Eschar, and he was cured by my said Kinsman, according to the common Method of Ulcers; but it was well nigh the Work of four Months. Since that, new Inflammations have begun to arise more than once, but hitherto have been timely remitted.

From an Indisposition, or malign Quality of the Humours within our Bodies, Mortification frequently arise; insomuch that we can scarce make a Fontanel in some Bodies, without running the Hazard of a Gangrene: Nor indeed can they be kept from Defluxion after they are made, without the Assistance of our Art. Instances hereof may be seen in several Places of this Book, particularly in the Treatise of *Ulcers with Intemperies*.

A Woman of about sixty Years of Age, extreme fat, and of a Scorbustick Habit of Body, sent for a Chirurgeon, to make her a Fontanel in her Arm. He cut it, and put in a Pea. She discharged him, and dressed it herself. About ten or twelve Days after, the Fontanel growing painful, she sent for the Chirurgeon, who, seeing it gangrened, sent for me. The Impression of the Pea into the Fat, before it was digested, had corrupted that, and the Parts about were thereby infected. We scari-fied the Lips, and cut into the Fat, I believe, above an Inch deep. We dressed it with *ol. tercbinth.* actually hot, upon an Armed Probe, filled up the Incision with *Præcipitate*, and applied a Cataplasim of Mithridate. By this Method of Dressing the Heat was restored, and it digested in few Days, and I left it to the Chirurgeon, who cured it.

In a Person of about forty Years of Age, I applied a mild Caustick below, on the Inside of the Knee, to make a Fontanel. The Eschar being small, I divided and digested it with little or no Pain; and the Eschar began to separate kindly: But it afterwards grew painful and gleeted, and the Ulcer corrupted very deep before the first Eschar separated.

*Observaⁿtion of a
gangrened
Arm.*

*Observaⁿtion of a
gangrened
Knee.*

This

This happened whilst the Patient dressed it herself, with those Dressings I left her Servant, she not taking much heed of it, till she was so lame that she could not stir out of her Chamber ; and then she sent for me, and to my Amazement I saw it gangrened. I presently cut out the loose Eschar, fomented it with Wine, and dabbed it *cum ol. terebinth.* hot, with an armed Probe, then lightly scarified it in the Bottom and Edges, and after, dabbed it again with *ol. terebinth.* filled it up with *Præcipitate,* and fomented it, till I had made a Cataplasm *cum medull. panis triticei, pulv. summitat. absinth.* & scord. decocted in Wine, with an Addition of Brandy, Saffron, and the Yolk of an Egg, which I applied over it, having first embrocated the Parts about it *cum ol. ros.* Thus, in three or four Dressings, I took off the Fluxion, and the scarified Lips digested, but the Ulcer itself lay dry, till the Sloughs made by the *Præcipitate* cast off by Digestion. From that time it incarned, and being contracted nearer, I dressed it with a Pea. It was very remarkable, that whilst the Ulcer was distempered, she was free from her other Complaints ; but after it was digested, she relapsed into her former Distempers, and lay some Days ill of a biliary Cholick. In several others I have seen the like in spite of all my Endeavours to prevent it : So also in making Fontanelles, sometimes by Incision in Parts, where there was no Likelihood of pressing on a Tendon, I have been glad to throw out the Pea, and heal them up again.

9. Observation of a gangrened Toe. But as People are sometimes subject to Gangrene by making of Fontanelles ; so others we hear of, that have been gangrened from paring of a Corn or Nail on their Toes. Amongst the Observations of a Phlegmon, you may see somewhat of it arising from a less Cause.

I was once sent for to a Person of Honour, about 60 Years of Age ; he was of a full Body, and seemingly healthful, but in his latter Years had omitted Exercise, by reason of a Stone in his Left Kidney. One Morning, in making himself ready, he perceived a black Spot on the Upper-part of his Foot, leading towards the Toe next the little one. It was no bigger than a Spangle, without Tumour, Pain, or Inflammation. It appearing bigger the next Morning, he sent for his Phy.

Physician and Chirurgeon ; they cut into it, and found it insensible. From that time it was rationally dressed ; but it enlarged itself amongst the Tendons, and especially toward that Toe, and affected the Bones. I being then consulted, and joined with that Chirurgeon, we cut off that Toe, and checked the Mortification. After which, with much Difficulty, we extinguished the Gangrene in the other Parts, by the various Applications prescribed, in the Method of Cure, and healed the sinuous Ulcer. During which, the Physician purged him frequently, and prescribed an Antiscorbutick Decoction of *sarsa*, *China*, *lign. guajaci*, with the Plants proper in such Cases, to dispose him to sweat, which he did some Days. One Evening, whilst he was sweating, I being accidentally present, he told me he felt a Numbness in the Balls of his Toes of the other Foot. I look'd upon them, and seeing them black and dry, cut into them, and found them insensible. I supposed they might have been burnt by the Bricks, neither the Patient, nor the Apothecary that sweat him, having discovered any thing of it before ; we concluded from the Malignity of the Humour, for they were directly gangrened ; and by that Method I cured them some Weeks after : But three or four Days after that, he was seized with an Apoplexy about eleven o'Clock on Sunday Morning. He recovered out of that Fit, but died that Afternoon in another.

Some other Instances I could give of this kind ; but this may serve to shew you to what little Purpose Amputations are in these Cases. But if the Body be youthful, and the Habit of Body tolerable, if Gangrenes resist the Applications above proposed, and penetrate more inwardly, you may then attempt them by the actual Cautery : For, according to that Aphorism of Hippocrates : *Illi affectus qui medicamentis non sanantur, ferro sanantur ; qui ferro non sanantur, igne sanantur ; qui igne non curantur, hos existimare oportet insanabiles :* Those Diseases which will not cure with Medicaments, are cured by a Knife ; and those which yield not to that, are cured by Fire ; and those which will yield to neither, are accounted incurable.

Actual
Cautery.

The actual Cautery doth indeed not only resist Putrefaction, but corroborates the Part.

But

But after all our Vigilancy and Industry in contriving Remedies to resist the Gangrene, if it does yet delude us, and terminate in a *Sphacelus*, there is then no more Need of taking Indication from antecedent Causes, or changing of Medicines, according to the Variety of the Causes that introduced it: For, whether any Gangrene arise from a hot *Intemperies*, or cold, moist, or dry, *Sphacelus* is always the same, Extinction of the native Heat, and Destruction of the Member. The Mortification creepeth on, and not only infecteth the Member but the Spirits, to the very Heart, with its corrupt Vapours mortifying the Vessels all along the sound Parts, and leaving the Member immoveable, without Sense or Heat, rotten, black, and cadaverous. Wherefore there is nothing more to be thought of in this Case, but timely Amputation, or cutting off the Member; the Cure of this Disease not consisting (as I said) in outward Applications, but manual Operation: And, what Success may be therefrom expected, is much to be doubted. *At satius erit, with Celsus, anceps auxilium experiri, quam nullum.* It is a miserable kind of Help, yet it is the Determination of all Authors, that in *Sphacelus membrum corruptum absindendum est.* In this Case it becomes the Chirurgeon to acquaint the Friends with this kind of Remedy, and withal to make his Prognostick accordingly. But before we proceed in this Operation, we shall take Notice of what some knowing Writers have writ hereof. For in those Places where Amputation cannot be made, as in the Buttock, Shoulder, Back, &c. *Fab. Hildamus* proposeth the Use of potential Cauterries applied to the mortified Part, and often renewed, till the last Eschar reacheth to the live Flesh: Yet he condemneth Arsenick, as being venomous, and producing many dangerous Symptoms. It is true, that I my self have often used that Method of Cure, in *Sarcomata*, with good Success; but in a Mortification there appear to me many greater Inconveniences that attend it: First, from the Caustick itself, as he proposeth it, of Salts; it will melt in the working, and is more disposed to spread in the Skin, than penetrate deep into the Flesh. This every young Chirurgeon knows, in his making of Fontanels, that he cannot apply a Bit of Caustick so little, tho' he use all his

Exirpa-
tion.

Art

Art in defending it, but that it will have spread much farther than he designed it. Then the Separation of such Eschars is too slow to effect the Design: And in an ill Habit of Body, such Medicaments are apt, of themselves, to procure a Mortification rather than Cure: Whereas, on the contrary, an actual Cautery answers all Intentions; it not only consumeth the Mortification, but drieth up the venomous Humour, thereby preventing its farther Progress, and also communicateth Warmth to the languishing Parts, by virtue of which the Separation is much furthered, and, by working upon the gangrened Sloughs, performed more easily, as you may see in my Practice elsewhere. But where Amputation itself is feasible, nay altogether necessary, as in the Limbs, there ariseth a new Question, Whether it ought to be done in the sound Part, or in the dead. *Fab. ab Aquapend.* adviseth the dead Part, within a Finger's Breadth of the live, (as also do many others). Then with a Cautery they burn up all the remaining Mortification: Others do perform the Operation with a hot Knife, the Figure of which you may see in *Hildanus*. *Aquapend.* speaks so confidently of his Success in the Practice of this Way, that utterly to deny the Thing were to give him the Lie. I shall only make this Objection, That the *Sphacelus* doth seldom affect the Member so equally round, as that an Operation in the dead Part is feasible: Nay, which is worse, when once the Mortification seizeth on the great Vessels, it runneth up so fast under the Skin, that before any considerable Part of the Member is outwardly gangrened on the one Side beyond the Knee or Elbow, the other Side will have reached to the *Inguen*, or *Axilla*. This, I confess, frustrates all Manner of Amputating, whether in sound or mortified Parts: Yet, generally speaking, the Gangrene doth not grow so fast, but that, if you make Amputation, two Fingers Breadth, more or less, within the live Flesh, you may prevent it, and that far better than it is possible to be done by the other Way of operating: For if you work there by actual Cautery, with a hot Knife, your Knife will stick fast in the Flesh, till the Moisture be wholly dried up, and then you must repeat many Knives and Cauterries, in every one of which you will meet with the same Inconveniences: Yea, before you can

Of Gangrene and Sphacelus. Book VI.

can cut thro' with your hot Knife, it is very probable that you will, near the Bone, meet with some Parts that are alive and sensible, especially when you come to the *Periostæum*; (for the Membranes do not usually corrupt at the same Rate of Swiftness with the Flesh;) and then all your Pains and Trouble will be as great, or greater, than if you did it in the sound Part. As to the other Inconveniences, I shall refer you to *Hildanus*, who hath taken Pains in confuting this Opinion.

Both these Ways of Amputation seem to me much more difficult and painful than our common Way; which makes me presume, they proposed them to prevent the Effusion of Blood.

But modern Chirurgeons have answered this Objection by good Bandages and Deligation of the Vessels; and, when we cut above the Knee, by clapping Cauteries to the Vessels only; which sufficiently answers that Intention. Thus have I seen, in my first Sea-Voyages, Amputations made above Knee, and afterwards practised them with great Ease and Safety.

The Manner of performing Amputation.

Now, since not only in this Chapter of Gangrene, but frequently elsewhere in this Book, we have mentioned Amputation, I think it necessary to take this Occasion of shewing the Manner of performing it; the rather, because the Operation is much the same, whether it be done upon the Account of Gangrene, or for other Reasons. I shall therefore, in general Terms, insert the whole Doctrine of Amputation, tho' briefly, not mattering whether the Examples instanced be *Sphaceli*, or not, all Instances being alike instructive.

What is to be considered in heat of Fights.

In heat of Fight, whether it be at Sea or Land, the Chirurgeon ought to consider, at the first Dressing, what Possibility there is of preserving the wounded Member; and accordingly, if there be no Hopes of saving it, to make his Amputation at that Instant, whilst the Patient is free of Fever, &c. Therefore, that you may the better make your Judgment of the Wounds, I shall give you some few Remarks of such as require Amputation: *viz.* If a Leg or Arm be shattered, by Splinter or great Shot, the Loss of Substance will direct you. If the principal Muscles be torn off, and the Bone fractured in Pieces; or if the Wound be with Musket-shot in the Inside of the Joint of the Elbow,

or

or in the Knee or Ankle, with a Fracture of the Bones of the said Joint : Nay, supposing it hath not fractured them, yet if the Bullet be so lodged, that you cannot extract it, you shall then presently make Extirpation of the Part. If it be the Arm, cut it off in the Place where it is so shattered, and saw off the End of the Bone smooth, your Assistant the while pulling up the muscular Skin and Flesh. If the Ankle be thus maimed, you shall then cut off the Leg within three or four Fingers Breadth under the Knee, in regard so long a Stump would be troublesome. But if the Leg be shattered off by the Calf, do not put your Patient to the Pain of new Amputation, for the shortening it a Hand's Breadth, or a little more. Save what you can of a shattered Hand. And if the Toes, with Part of the Foot, were shot off, cut off the lacerated Parts smooth, but with Care to save as much of the Foot, with the Heel, as you can ; it being much better than a Wooden Leg. But if the Arm or Leg be not so shattered, tho' the Wound be large on one Side, and hang gaping down with great Fracture of Bones, yet be not disengaged, the Largeness of the Wound will make for your better pulling out those extraneous Bodies, Shivers, Splinters, Rags, or ought else, and for the easier Discharge of Matter. Dress it as a Wound by a Splinter.

If the great Joint be so shot, by Musket-Bullet, that you think it not reasonable to cut off the Member, be sure you make Extraction of the Bullet, and free it of all extraneous Bodies, leaving not the least Shiver to prick the Nerves or Tendons ; and make such Way presently, that you may be able to dress the wounded Nerves, Tendons, &c. without making new Incision, when the Part is inflamed, and unfit for it.

If after some Days the Wound do not digest, but inflame and gangrene, and the Gangrene do not yield to your Applications, as hath been proposed in Gangrene ; then, as in a *Sphacelus*, you are to proceed with the Extirpation of that rotten Member, while the Patient is free from *Delirium*, and hath Strength to bear the Operation.

Seat him so as it may be for your Conveniency. At Sea they sit or ly; I never took much Notice which; nor do I remember I had ever any Body to hold them; but with the Help of my Mates, and some one or two that belonged to the Hold, I went on with my Work. At *Sterling* I made an Amputation above the Knee, and had as little Help; besides my Servants, there was only a Sea-Chirurgeon assisting me. We stopt the Flux of Blood by actual Cautery, and the Wound digested and cured without any ill Accident: Yet, where we have Convenience to proceed more formally, we always place the Patient to our most Advantage, where he may be held firm, and in a clear Light, and so that our Assistants may come better about us. The Member is to be supported by some one, whilst another standeth behind the Patient, and draweth up the Skin and musculous Flesh: Then make your Ligature two Fingers Breadth, or thereabout, in the sound Part; so that if you amputate, in Case of Mortification, you may be sure to quit yourself of it. This Ligature is omitted by many of our Chirurgeons here in this City, they only making a Turn with a Tape, pinning it on as a Mark to circumcide by: And, instead of the Ligature I propose, they make a Gripe, which Gripe is commonly made by some Assistant who hath Strength to do it. Indeed this is good where a shatter'd Member is to be cut off, to smooth the Stump; in which Case there is no great Fear of bleeding. But in Amputations, it seems to be very inconvenient; for I never yet saw any Man so gripe, but that still the Artery bled with a greater Force than was allowable; yea, when Mr. *Woodall* griped, who was so applauded, and in truth made for the Work. It being so, in what a Huddle is the Stump then dressed? But suppose the uneasy Posture, and the long Griping, tires the Griper, or that his Hand be cramp't the While, What Condition is the Patient then in? Whereas, by this ancient Way of Ligature, the Vessels are secured from bleeding, the Member benummed, and the Flesh held steady, ready to receive the Impression of your crooked Knife (or Razor, which I have often amputated with). This Ligature made, the Assistant strengthens it, whilst he draws up the musculous Flesh. In the mean time the Operator, with a sharp crooked Knife,

by

by a Turn with his Hand cuts the Flesh off round to the Bone ; then with the Back of it he scrapes the *Periostæum* from the Bone ; if there be two Bones, then, with a dividing Knife, he separates the fleshy Membrane from them. The Bones freed of the *Periostæum*, Guido proposes a Linen Cloth, and *Hil'danus* a kind of Purse, to be brought over the upper divided Flesh, to pull it upward, and make more Way for the Saw. But I think that needless. The Flesh divided, the Parts separate enough of themselves, besides the Assistant's pulling up the muscular Flesh and Skin is sufficient. That done, you are at Liberty, whether you will cauterize the Vessels by a Button Cautery, or by Ligature stop the Bleeding, or by Agglutination. The Use of *Chalcanthum* I do not approve. To apply Escharoticks to the Ends of the Nerves and Tendons* newly incised, causes great Pain, weakens the Part, and makes way for Gangrene ; it not being likely that you can so apply them to the Artery but that you must burn the Parts about, which are, as I said, the Nerves, &c. The Way *Hildanus* proposes by drawing the Vessels out by a *Forceps*, is not a Work to be done in Heat of Fight, not without a clear Day-light. If you attempt it on Land, his Arm would be bowed, and his Leg stretched out, that the Vessels may be the longer after Extirpation, that you may the better take hold of them. *Ambros. Par.* proposes a more easy and sure way of Deligation, by passing a Needle with a strong twisted Thread thro' the Skin near the great Vessels ; making your Stitch over the said Vessels, by piercing thro' the raw Flesh and Skin ; then make your Ligature upon a Fold of a Rag. Thus you bind the Artery and Vein. These several Ways have been practised, by eminent Chirurgeons, for the stopping the Blood of the Arteries in Amputation : But the late Discovery of the Royal Styptick hath rendred them of les Use. But in Heat of Fight it will be necessary to have your actual Cautery always ready, for that will secure the bleeding Arteries in a Moment, and fortify the Part against the future Putrefaction. They require, after Cauterization, no such strict Bandage as that thereby you need to fear Interception of the Spirits. When we cauterize the Artery, we do then touch the End of the Bone, it hastening the Exfoliation. The next thing

is the loosening the Ligature, and bringing the Lips close over the Stump: Then, whether you should with a cross Stitch hold them so, or content your self by Bandage as well as you can, is by some controverted. They that object against the former, say, it causes Pain and Inflammation; so doth Bandage also if it be made too streight. Therefore they should object against that also. The most that I have seen without the cross Stitch have, the next Dressing, been broad Stumps, some of them with Lips turned outward by the Bandage; in the least of them the whole Stump hath been bare; whereas in those in which I have made the cross Stitch, the Lips have been found close to the Bone at the next Dressing, covering the great Vessels, and a third Part, or Half of the Stump hath been well digested, and by the second Dressing hath been near agglutinated, so far as it lay under that Skin, and, without Inflammation, happily cured: Whereas the broad Stump is a certain Sign of a long Cure, and commonly the Death of the Patient. The exposing these incised Parts too much to the Air, causes Pain; and the want of a native Heat makes them gleet: Or, if they do digest, the Discharge of so great a Quantity of Matter commonly exhausts the Spirits of the Patient. If the muscular Flesh and Skin are well pulled up in time of Amputation, and brought over by moderate Extension, as far as they will easily admit, you will find it not painful. You ought to pierce the Skin with a Needle and strong brown Thread, ceared about Half an Inch from the Edges of the Lips. Having made them cro's from Side to Side equally, tie them with a moderate Astriction, then apply a Pledgit on the cauterized Vessels with *pulv. irid. succ. cepar. cum melle.* But if no Cautery was used, the Buttons of Tow spread over with your Restrictive, and dipt in *pulv. Galeni,* must be applied to the Mouths of the Vessels. Afterwards sprinkle the Stump thick with this Powder: *R. bol. Armen. farin. volatil. picis naval. an. 3ij. aloes, thuris, mastich. sang. dracon. an. 3j. gyfſi 3js. pill. lepor. corii raspati, an. 3ij. Mſc. S. A.* You may mix some of the same *cum album. ovor.* and apply it upon a thick round Stupe, which hath first been wet in Oxy-crater, and dried; and over that another Stupe spread with the same, so broad as to come over the first, and up

up a pretty Height above the Stump. This latter must be snipt deep in the Edges, that it may lie smooth about the Member. An Ox-Bladder ready cut and wet, is to be turned over it, and a cross Cloth next the Bladder, to hold the Dressing steady: Then, with a Rowler with two Heads, begin upon the Stump, and rowl up to the next Joint, and so again about the Member, to retain your Dressings firm; then fasten it so as that it may not be capable of falling off: But before you make this Bandage, you ought to apply your Defensative over the Parts above the Stump. Some apply it before they begin the Amputation; but then 'tis apt to wrinkle, and to sit uneasy. In the dressing of the Stumps, you ought so to apply your Medicaments, that you may, without much Bungle, rowl up the Member; then place it to the Ease of the Patient, one holding his Hand some while upon the Stump: Your Defensative may be of the same which is prescribed in Gun-shot Wounds: Or,
 Rx far. bord. bol. Armen. ar. 3ij. sang. dracon. 3jss.
 fior. ros. rubr. balaust. nuc. cupress. pulv. an. 3vj. acet.
 3x. album. ovor. num. viij. ol. ros. & myrtill. an 3j.
 ceræ, q. s. Boil these Powders in acetum, then add the rest to it, to make it of the Consistence of a ~~Creme~~.
 The third Day take off the Dressings, and then you may cut the cross Stitch, and sprinkle the Wound with pulv. Galeni, and dress it with this Digestive: Rx terebinth. lot. in decoct. bord. 3ij. ol. lumbr. 3jss. gumm. elemi dissolut. in predict. ol. 3ss. farin. bord. cribrat. 3j. vstell. unius ovi, croci pulv. 3j. Misc. and apply to the Bone a Pledgit of dry Lint, or press'd out of spir. vini; after the Wound is digested, you may deterge with mundif. Paracels. or apii; or this, Rx terebinth. Venet. lot. in spir. vin. 3ij. pulv. rad. irid. aristoloch. rot. sarcocoll. thuris, mell. ros. an. 3j. then incarn and cicatrize, as hath been said in compound Wounds.

Whilst I was a Prisoner at Chester, after the Battle of Worcester, I was carried by Colonel Duckenfield's Order of the ill to a Man that, out of much Zeal to the Cause, pursuing our scattered Forces, was shot thro' the Joint of ^{Consequenc}es of the Elbow; the Bullet entering in at the external Part ^{Wounds in} of the Os humeri, and passing out between the Ulna and the Radius. He had been afflicted with great Pain the Space of Six Weeks. I found the Wound undigested,

and full of a loose, soft, white Flesh, the Bones fractured, and not likely to unite, many Shivers lying included within the Joints, and incapable of being drawn out : The lower Part of the Arm was oedematous to the Fingers Ends, as full as the Skin could well contain, and the upper Part was inflamed, also about the *Os humeri* and *Axilla* a perfect *Phlegmon* was formed. The Patient thus tired with Pain, desired to be cured or have his Arm cut off. To which Purpose he had procured the Governor's Leave for my staying with him. But while that *Phlegmon* was upon the upper Parts, there was no Hope of a prosperous Amputation, nor of Cure, while those Shivers of Bones lay pricking the nervous Parts within the Joint. The *Phlegmon* was too forward for Repercussion, and yet not likely to suppurate in less than a Week's Time ; wherefore I endeavoured by Emollients, and some Discutients, to succour the grieved Shoulder, and Parts thereabout, by hindering the Increase of the *Phlegmon*, and to give some Perpiration to the Part : Then with good Fomentations I corroborated the weak and oedematous Member below ; to which End I also raised his Hand nearer to his Breast ; also, by Detergents and Bandage, I disposed the Wounds and fractur'd Part to a better Condition, made made Way for Discharge of Matter, and endeavoured to extract the Shivers of Bones ; then applied Medicaments to remove the *Caries*. After some Days the Abscess suppurated in the upper Part of the Shoulder, and in the Arm-Pit ; and while the Matter discharged from thence, the Tumour discussed, and that upper Orifice cured soon after ; but the continual Pain in the fractured Joint kept that Opening in the *Axilla* from healing. The Patient growing weaker, and without Hopes of Cure, I was necessitated to proceed to Amputation : To which Purpose I sent to *Chester* for Mr. *Murray*, a knowing Chirurgeon, (since Mayor of that City) to come with Instruments and other Necessaries, whereby I might the better do the Work. He accordingly came, and we prepared Dressings ready, which were Stupes or Pledgits of fine short Tow well work'd, some like *Splenia*, others were round, and bigger or less. We wetted them all in Oxy-cratae, and dried them. We also made some Buttons of Tow, Compresses of Linen Cloths dipt in Oxy-cratae, Three

Three or Four Rowlers with one or two Heads, provided Needles threaded, and ceared for making the cross Stitch, and lesser Needles threaded for common Use, with Filleting for Ligature, and Bladders ready cut and wet in Oxy-crater; also a Defensative of the above mentioned Prescription spread upon a soft Linen Cloth, to apply upon the Parts above more distant, and a Mixture of the Astringent Powders, with Whites of Eggs, to spread upon the *Splenia* and Buttons, which Buttons were also dipt in some of the same Powders. Then for the round Pledgits, which were designed to be applied next to the Stump, Mr. M. proposed, that they might be bread with a Mixture of Umber, and *Calx viva*, with Whites of Eggs, according to Dr. Read in his Observation of an Amputation he perform'd upon a Servant of the Lord *Gerrard's*, at *Gerrard's Bromley*, whose Fame yet lives in that Country, and will, amongst us Chirurgeons, as long as his elaborate Lectures have a Being.

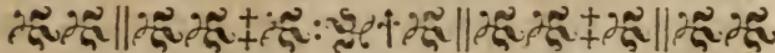
The *Apparatus* thus made, and the Patient some while before refresh'd with a Draught of a good Caudle, his Friends took him out of his Bed, and placed him in a Chair towards the Light. One of his Servants held his Arm, another of his Friends held his other Hand; then Mr. Murray drew up the Skin and musculous Flesh of the Arm towards his Shoulder, whilst I made a strong Bandage some three or four Fingers above the affected Part; then with a good Knife I cut off the Flesh by a quick Turn of my Hand, Mr. Murray pulling up the Flesh whilst I bared the Bones: After which, with a few Motions of my Saw, I separated the Bone, the Patient not so much as whimpering the while. After this, Mr. Murray thrusting his Hands downwards, with the musculous Flesh and Skin which he had drawn upwards, I passed a strong Needle and Thread thro' the Middle of the Flesh and Skin on both Sides, within Half an Inch of the Edges, and brought the Lips close within a narrow Compas; and having tied that Ligature fast, and cut off the String, I passed the Needle again through the two contrary Sides, which I tied as close, then loosened the Ligature above, and applied the little round Stupes of Tow spread with a Quantity of *Galen's Powder mixt cum album. ovi*. The long Pledgits were applied from the Middle of the Stump each

Way upwards along the Arm, over which I put on a Bladder and a cross Cloth, then rowled up the Stump, and made the Bandage under his other Arm, and over his Neck. This Bandage prevented an Accident which hath since happened to a Patient here in *London*, where many of the best Chirurgeons were concerned. He being thus dress'd, we put him into his Bed. The third Day we took off the Dressings, and found the Stump well digested, and at least two Spoonfuls of Matter discharged. We then dressed it with a Digestive *ex terebinth. lot. in decoct. malvar.* the Yolk of an Egg and *ol. ros.* spread on a large Stupe of Tow, on which was sprinkled a Proportion of Galen's Powder; then embrocated the Parts about with *ol. ros.* applying *emplast. è bolo* over all, with moderate Bandage, and afterwards deterged with that of *Paracels.* and with Sarcoticks incarned the Wound. During which the Bone exfoliated, and the Stump soon after cicatrized. Then having procured a Pass to come to *London*, I hastened away.

Observat.

At the Siege of *Weymouth*, I was called at Break of Day, to an *Irishman* of Lieutenant-Colonel *Ballard's* Regiment, who shooting off his Musket, it brake, and tore his Hand to Pieces after a strange Manner. I designing to cut off his Hand, sent presently to my Quarters, to one of my Servants, to bring both Saw and Knife, also Dressings, of which at those Times we had always ready. They being brought, I took a Red Ribbon from off my Case of Lancets, and bound it about his Arm, some four Fingers Breadth above the *Carpus*; and having cut the Flesh round off, I bared the Bones, and separated the Flesh between them; then I sawed off the Bones, and united my Ligature, and bringing down the muscular Flesh and Skin over the End of them, without making any cross Stitch, I dress'd up that Stump with Restrictives and good Bandage, and returned again to my Quarters. I had not been one Hour gone, but I was sent for again to this Soldier, he being (as the Messenger said) grievously pained. I wondred at it, and hastning away; but, before I came to his Hut, I heard him crying. I enquired the Cause, it was some while before he would answer me; but at last, he told me, he was not able to endure that Red Ribbon that I tied his Arm with. I was at first surprized

prized to think I should leave the Ligature upon his Arm, that being a sure Way to bring a Mortification upon the Part: I therefore putting my Hand in my Pocket, and feeling the Ribbon on the Case of Lancets, shew'd it him. He seem'd at first to doubt it; but after he saw it was so, he laugh'd, and was from that time in Ease. Two Days after, our Men were chased out of the Town and Chapel-Fort. I was at the same time dressing the wounded Men in the Town almost under the Chapel-Fort, and hearing a Woman cry, *Fly, fly, the Fort is taken,* I turn'd aside a little amazed towards the Line, not knowing what had been done; but getting up the Works, I saw our People running away, and those of the Fort shooting at them. I slipt down this Work into the Ditch, and got out of the Trench, and as I began to run, hearing one call, Chirurgeon, I turned back, and seeing a Man hold up a stumped Arm, I thought it was the *Irishman* whom I had so lately dismembred; whereupon I returned, and helped him up. We ran together, it being within half a Musket-shot of the Enemies Fort; but he outran me quite. I afterwards cured him in few Weeks, by the Method already proposed in the preceding Discourse.



C H A P. III.

Of F I S T U L Æ.

A *Fistula*, according to the vulgar Denomination, is a Sinuous Ulcer supposed to be of two or three Months Continuance. But to speak strictly, those only are *Fistulæ* which are at least of so many Years Growth, and are accompanied with a *Callus*. Every Part of the Body is subject to these Ulcers; but especially the Arms, Legs, Thighs and Hips. The worst sort of these, at least that ever I saw, was from Gun-shot Wounds with Fracture, where there hath been Loss of Bone, or

where, thro' long Continuance, the *Caries* hath chambered the Bone; in which Cases the Lips of the Wound, and the Wound itself, become callous, by keeping them long open, in order to the Exfoliation of the Bone, in which Case the Lips grow hard, and become thick and inverted. In these the *Sinus's* are more or fewer in Number, according as the Abscess or Wound was more or less sinuous.

Causes.

This *Callus* of the *Fistula* is hastened by the Transpiration and Resolution of the thin and subtle Humours, and the Incrassation of the more pituitous, by the Congestion of which a long Pipe of Skin is made, which brancherh itself inwards from the Orifice, quite thro' all the Cavities of the Ulcer; from whence it hath its Name.

Difference.

The Difference of these *Fistulae* are made, not only from the Parts affected, as some are in fleshy Parts, others in Tendons, or in the Bones or Joints, or in the Breast, Belly, &c. but also from the Figure, Magnitude, and Number of the *Sinus's*; as sometimes there is only one, then again two or three, crooked or winding, till they enter the Bones themselves.

Signs.

They are known by the View, and by the touching of the Parts, or by searching with a Probe, and from the Discharge of a thin serous foetid Matter, also from the arched Hollowness they have. If by your searching, the Parts are pained, or if Blood follows your Probe, the *Fistula* is not confirmed: But if neither happen, then it is.

Prognostick.

All *Fistula's* are hard to cure, and those of long Continuance with great Discharge of depraved Humours from the *Viscera* are worst. Those amongst the Bones and great Joints are very difficult to cure, by reason of the Sensibility of the Parts, which, for the most Part, admits neither of Dilatation nor Incision. Those which are in such Places where you may safely lay them open, or remove the *Callus*, are more easy of Cure.

Cure.

The Way of *Cure* is performed, either by manual Operation, or by Medicaments. But before you proceed in either, you are to consider that these *Fistula's* are subject to Pain and Defluxion; wherefore you are, in the first Place, to proceed by Evacuation of those Humours which may disturb you in your Work; and that

that is done by Purging and Bleeding, good Traumatick Decoctions, with Observation of Diet, &c. as is said in the universal Regimen of Ulcers.

To proceed in the Cure by Manual Operation, you are to consider the Part affected, whether the *Callus* be only in the Lips, or in the *Basis* of the *Fistula*, or throughout the whole Length of the *Sinus*. And this is discovered, as I have said before, by the Probe, &c. If there be neither Pain nor Matter, and the *Fistula* be tending only down directly to the Bone, it will then be best to let it alone, accounting it as an imperfect *Cicatrix*, and that it will in Time grow more close: But if it be otherwise, you must then remove the *Callus* in order to the Cure.

If the *Sinus* be in a Place where it may conveniently be laid open without Dilatation, divide it with Knife or Scissars, the whole Length. If, after laying it open, the *Sinus* be not throughout callous, remove that which is, and heal it according to the common Method of Ulcers: But if the Orifice of the *Fistula* be so strait and narrow, that you cannot lay it open, you must then dilate it with Tents of Sponge, Gentian, *Aristolochia*, Eldern-pith, &c. until the *Sinus* be large enough for your Purpose. And to further this Work, it may be proper that you outwardly apply such Medicaments as may, by their emollient and digestive Quality, resolve and dissipate the Matter impacted in the Parts about it; and these are, *rad. althææ*, *lilior. enulæ campan.* *sigill. Solomon. cucumber. agrest. sem. lini, fænugræc. medull. ossium, axung. procin. axung. human. anseris, gallin. unguent. dialthææ, gum. galban. Ammoniac. &c.* Of these you may make Fomentations, Cataplasms, or Cerotes. You have also to this Purpose *empl. de ranis cum & fine Mercurio, empl. de mucilag. diathyl. cum gum.* The *Fistula* thus disposed for laying open, you must consider whether you may not remove the *Callus* by Catharticks; to which Purpose *Celsus* proposeth *lachr. papaver. Cadmia, atramentum sutorium, ærugo, sandarach. alum.* We commonly use *lap. Caustic. Vigon. troch. de minio, arsenicum, ol. chalchanth :* Or thus: Rx *ceræ, resinæ, an. ʒj. sublimat. ʒij. or more or less; mix this upon the Fire, and dip a Sponge in it, but not too hot, lest you burn your Sponge; then press it out, and cut it into such*

such a Form as may serve your Purpose. Guido commends *aq. fortis* as most excellent for destroying the *Callus* of all these *Fistula's*: But if you had rather have an Injection, you may make this or such like: Rx *unguent. Egyptiac. 3ss. sublimat. 3ss. arsenic. 3j. lixiv. sapon. 3j. aq. ros. 3ij. aq. plantag. 3iv.* boil this *ad tertia partis consumpt.* cast in a little of it with a Syringe three Days together, shutting the Orifice up with Wax, or some Plaster, so shall you consume all the *Callus*: But you must consider well the Situation of the *Fistula*, lest by its too far penetrating it hurt the Bone or Parts underneath. After the Application of these stronger Medicaments, you must by Lenients mitigate the Pain, and defend the Part from Defluxions, which for the most Part attend such Escaroticks. These are Decoc-tions of *fol. malvae, bismalvæ, violar. veruasc. hyoscyam. sem. cydonior. hord.* Or, *ol. vitel. ovor. butyrum. axung. porcin. unguent. basilic. cum ol. lilior. dialthæa, &c.* And apply over them Refrigerants; as, *empl. è bolo, oxelæum, diapalm. cum succis;* or some of the Defensatives mentioned in this Treatise. When the Inflammation is repelled, and the Sloughs cast off, you may deterge with this: Rx *terebinth. in aq. vitæ lot. 3vij. succ. apii cynogloss. an. 3vj. mell. ros. 3js. decoq. ad succ. consumpt. deinde adde rad. aristoloch. rot. pulv. 3ij. far. lupinor. 3ss.* you may add to it, *pulv. ireos, myrrh. sarcocoll. thuris,* and thereby incarn; then cicatrize with *unguent. desiccat. rubr. &c.* If the Bone be carious, you ought to consider how far the *Caries* hath entered into it, and proceed in the Removal of it, either by actual Cautery, or Rugines, scraping the Rottenness off: Then, by Catagmaticks, hasten the Exfoliation of the Bone, and proceed in the rest of the Cure with Sarco-ticks and Epuloticks: But if the *Fistula* be near, or over some noble Part; or if there be Nerve, Tendon, or Artery near; or if it be deep in the great Bones or in the Joints, where you may not safely proceed by actual or potential Cautery, and it will not yield to milder Medicaments; you shall do better to palliate it by some Waters and Unguents, which may dispose the Part to quiet, purging the Patient sometimes, and observing the Universal Regimen in Diet, &c.

An Officer of the King's Army laboured long of a *Fistula*, occasioned by a Gun-shot Wound in the upper Part of the *Os tibiae* near the Knee, where it had formerly been shattered, many Fragments of Bones casting out at Times. He had been sometime my Patient in *France*; but here I finished what I there attempted, and had not Time to do. After general Evacuation, I applied a Cautick the whole Length of the *Sinus*, whereby I took off that *Callus*, gave Vent to the Discharge of that foetid *Ichor*, made in the Ulcer, and took out several Pieces of the rotten Bone which were shut in there: That done, I scraped away the remaining Rotteness, and dress'd the Bone with Catagmatick Powders, &c. by which Means, after some time, a *Callus* thrust forth, and united with the neighbouring Flesh, which incarned with the Lips, and was afterwards cicatrized by the common Epuloticks.

It often happeneth, that in the Time of the Exfoliation of carious Bones, as in Gun-shot Wounds and old Ulcers, while we are attending Exfoliation, the Lips grow callous, so that the *Cicatrix* is deep, and the Lips lie at some Distance: In which Case heretofore I have taken much Pains to smooth them; but have since by Experience found, that in time those Lips sink of themselves, and as the *Callus* riseth up to them, the *Cicatrix* becometh firm and seemly, without giving the Patient that Trouble of removing them by Cautery or Knife.



A

T R E A T I S E O F F R A C T U R E S and L U X A T I O N S.

The S E V E N T H Book.

C H A P. I.

Of Fractures.

The Office
and Use
of Bones.



Bone is a similar Part of the Body, and the hardest and driest of all. The general Use of which is *Stabilimentum ac fundamentum reliquis omnibus partibus largiri*, to be a firm Prop and Foundation, upon the Strength whereof all the rest of the Parts are built. The whole Skeleton considered

sidered jointly, may be looked upon as performing that Office to the little World, that *Atlas* hath been fabulously reported to do to the great one : It bears the whole Bulk of it, and sustains it in all its Motions ; none of which could be performed, if either the Bones were not, or not so articulated and jointed, as upon Defection they appear to be. *Nam si ossa abessent, non slecturemus manus, non nervos & fibras :* Nay, if the least Bone be but a little maimed, the Use of the Part is hindred. But they are not only *Fulcimenta*, as Galen says, *De Usu partium, sed etiam Defensio*, but also a Defence. The *Cranium, veluti Galea*, as a Helmet defends the Brain from external Injuries : So *Pectus Ossibus clauditur* ; the Heart, Lungs, and great Vessels of the Thorax, are guarded by a Wall of Ribs. The *Spinia* is a Bulwark to the Marrow included in it ; and such a Defence is the *Os Pubis* and the *Os coxae*, and *Ileum*, to the Womb and Bladder. Others otherwise serve the Uses of Nature. As the three little Bones *in meatu Auditorio*, by firming the *Tympanum*, are a great Help to the Hearing : The *Os hyoides* assisteth the swallowing, by managing the Root of the Tongue and the *Epiglottis* : The *Rotula* serves the Motions of the Knee ; and the Teeth prepare the Meat by Mastication. Not a Bone but hath its particular End set out. There was a Reason of the Temper, of the Magnitude, of the Number, of the Substance, of the Situation, of the Connexion of them ; the wise Creator as much shunning Superfluity as Deficiency. Indeed the whole Fabrick is so full of Excellency, that it would take up much Time to express it : But that is not my Busines. The Subject I have undertaken to treat of is their Misfortune, and that is two-fold ; to be fractured, and dislocated. That of Fractures I have proposed for the first Part of my present Discourse, and that only in general, it being sufficient for my Design.

To proceed methodically, I shall begin with their Definition of a Fracture, who, according to Galen, *de Fracto methodo medendi*, make it to be *Unitonis five continuitates. tis solutio quaecunque in osse.* But this being too general, and taking in all Cariosity and Ulcers of the Bones, which hardly belong to this Head of Chirurgery, the Moderns have more closely defined it to be *Ossis divisio fess*

seu ruptura à causa violenter irruente. But this likewise seems to me to be liable to many Exceptions. I shall name only this, *viz.* That a Cut made into a Bone by a Sword or a sharp Instrument, seems to be rather a Wound than a Fracture. And for this Reason, *Guido de Cauliaco* maks it to be *continuitatis solutio in osse non à re qualibet facta sed ab ea quæ contundit*: But I must still beg Pardon, if I be not yet satisfied with this Description, because it leaves out all such Fractures as are made by any accidental bowing of a Bone, either in a Wrench, or any other Case, where, without any Blow or Contusion of Parts, the Bone snaps in funder, and then wounds the neighbouring Muscles, even to the thrusting of itself very often quite through the Skin. These are (Cases of Battle excepted) the most frequent of all Fractures; yet not without some Violence to be reduced to any of these latter Definitions. I shall therefore chuse to define a Fracture in the following Words: It is a Solution of Continuity in a Bone, suddenly made, either by Contusion or Flexure. By Contusion I mean either a Blow by a blunt Instrument, or a Pressure by a great Weight; either of which usually bruise the Flesh about the Bone, as well as the Bone itself. In Contrafissures indeed the Bruise is not immediately upon the Fracture, but in the Place where the Blow is given. In Flexure, there is seldom any Bruise, but what is made by the Edges of the Bone itself after it is snapp'd in funder. All other Fractures are reducible to these.

Amongst the Greeks it was commonly known by the Name of *Catagma*, I purpose not to trouble you with the nice Distinctions in Fractures, nor yet with their various Names. *Galen*, in his Book *de Method. medendi*, complains thus in his Time: *Non desunt ex Medicis junioribus, qui ambitiose omnes Fracturarum differentias propriis nominibus interpretantur*; There want not (saith he) young Physicians who affect to give proper Names to all the several Kinds of Fractures, *at non Hippocrates hujus fuit sententia*; nor shall I spend my Time so, but, according to *Galen*, do take the Difference in Fractures to arise: 1. *a figura*, 2. *a magnitudine*, 3. *ab ossium fractorum varietate*. First, from their Figure; and that is either right *quæ fit per longitudinem*; or transverse, *per latitudinem*; or oblique, which is, as it were,

The Author's Definition of Fractures.

Differences

compounded out of the two former. Secondly, *a magnitudine*, according as the Fracture is greater or less. The third Difference is, *ab ossibus ipsis*, that is, from the Bones themselves that are broken, whether it be the Arm, Leg, Ribs, &c.

Causes of Fractures internal there are none, unless *Causæ*. they proceed *ab humoribus corporis erodentibus*; and of that Sort you may read many in *Schenckius, Fabr. Hildanus*, and others. I myself have seen some, and lately; but these being from Erosion, and rather to be called Ulcers with Caries, and therefore more fit to be discoursed of among Ulcers of that Kind, to which I refer you.

Of Causes external there are many; as the too violent Assaults or Stroaks of all external Things, which may bruise, break, shatter, or bend. In this Number of Causes may also be reckoned Falls from on high, &c.

The Signs of a Fracture without a Wound are, for *Signs*, the most part, evident. The first and most certain is, when in our handling the Part, we feel the Pieces of Bones severed asunder, and hear them crackle. Secondly, the Impotency of the Member. Thirdly, vehement Pain. Fourthly, a Distortion of the Part. It may also be discovered by comparing the one Member with the other, the fractured being the shorter. But if there be a Wound joined to the Fracture, then if the Bones thrust themselves not forth, yet you may easily know the Member to be fractured, if you search with your Finger or Probe. There is also a Curvedness which may be reduced to a Fracture. I have seen it in Children often, as in *D. C's* little Daughter in the *Old Baily*, and Mr. *N's* Son in *Blackfryers*, and others. It is as it were when you break a green Stick; it breaks, but separates not, so is cured by a due Extension, with little Trouble to the Chirurgeon, or Pain to the Patient, after the Extension is made.

If the Fracture be *secundum longitudinem*, it will appear first by the unnatural Thickness of the Member, then by the Pain and Inequality of the Part.

As to the Prognostick or Presage, a Fracture of the Bones cannot be without Danger; for of Necessity the Solution of Continuity ~~must~~ be great. If a Wound be *Prognostick*
must made

made in a fleshy Part, it is then proportionable to the Weapon that made it, & non ultra: But if the Bone be broken, propter rigiditatem & continuitatem non potest frangi, nisi totum frangatur. The Fracture is more dangerous in a great Bone than in a small; and the greater, if both the Bones be broken, as the two Focils in the Leg, or if it be in the Arm, where the *Radius* and *Ulna* are; yet if it happen in the Middle of the Bones, it is the less dangerous. Those in or near the Joint are more painful, and difficultly cured. And if any Shivers press upon the nervous Parts, ill Accidents commonly follow: But of all the Fractures, that with a Wound is most dangerous.

Cure.

As to the time of Cure, the lesser Bones are perfected in fourteen, eighteen, or twenty-five Days, the bigger in forty or fifty, according to *Guido*. Yet let me advise you not to be too hasty in taking the Patients out of their Beds; for in some Bodies the Generation of *Callus* is very slow, and a new Distortion may happen, and ill Accidents follow. I have been called into Consultation upon such an Accident; the Patient did recover, but lying very long within Doors, contracted such an ill Habit of Body as was not got off in a long while after.

In the Cure of Fractures Union is required: But that cannot be made, unless Pain and Inflammation be prevented. For a Fracture of the Bones is not made without an internal wounding of the *Periostæum* and Parts next to it, whence Pain arises, which stirs up Defluxion, and is attended often with great Inflammation; and from the Weakness of the Member many Excrements are made and received, which it is neither capable to assimilate, nor yet expel. And the Mischief is so much the greater, by how much the Bones lie deeper under the Muscles, where they cannot be set, by reason of the great Quantity of Flesh interposing between them and the Hand of the Artist. The Intention pursued in this Case is the Union of Bones, as I have already said, which is not performed by the first Intention, unless it be in little Children, but by the second, viz. an intervening of *Callus*.

The Method I hereto propose is, first, to join the fractured Parts together ; secondly, to keep them so joined ; thirdly, to preserve the Tone of the Part ; fourthly, to generate Callus ; fifthly, to correct Accidents.

*Intentions
of Cure.*

That the Parts may be rightly joined together, there is need of Extension and Coaptation : For in Fractures, especially transverse ones, the Bones are commonly distorted, the Rectitude of the Member lost, some Parts are prominent, and others hollow, and the fractured Bones lying one upon another ; and so the Member is made short : & quia *Musculi perpetuo membra trahunt versus suum principium*, therefore Extension is necessary, that the Parts which are indirect, may be brought right, and the Parts that stick out may be reduced to their Cavities. And altho' sometimes the Member seemeth not to be short, as if it consists of two Bones, and one broken, or that the fractured Bones do not lie one over another ; nevertheless, you ought to make due Extension in all Fractures, because the Bones never lie exactly equal, and most frequently they ride one over another. The want of which Extension, is one Reason why the fractured Thigh-Bones happen to be so often shorter than they should be, as *Celsus* hath it in these Words : *Si femur perfractum fuerit, breve erit* : His Reason is, *quia nunquam in antiquum statum revertitur*. And I find in *Galen*, that *Hippocrates* says the same of the Leg and Arm ; and withal, tells us it is so, *nisi ante confirmationem extensio debita adhibeatur, & commoda deligatione ossium coaptatio servetur*. By which you may observe, the Fault is want of good Extension, and keeping the Part in its right Seat : For unless that be done, you shall hazard the starting again of the Bones, and thereby the fractured Ends may happen to be broken off by mutual Attrition in the Act of joining together ; and if those Pieces do chance to fall in between the main Bones, they will then hinder their uniting ; and if those Shivers slide outwardly towards the Membranes, they will cause extreme Pain. This Inconvenience is therefore to be shunned by the Help of Extension. But again, in Extension there must be observed a Mean, as *Vigo* notes : *Ad magnam quidem Extensionem futurus Spasmus valde suspectus est* : Yea,

some-

sometimes the very Muscles are torn asunder, as Galen tells us ; and *Albuscius* cries out, *Cave Extensionem vehementem & Compressionem fortem, sicut faciunt multistolidorum : Multoties enim faciunt Apostema calidum & contractionem in membro :* By which it seems in his time there were such People who thereby drew sad Accidents, as Convulsions, and Inflammations, upon their Patients : But if the Extension be less than it should, then, as I said before, the Ends of the Bones rub one against another, and are broken, or not seated in their proper Place. Therefore the bigger Bones having large Muscles, which draw the Member forcibly to their Original, do require the stronger Extension ; and such are those of the Thighs, Legs, and Arms. And if both the Focils of the Arm be broken, the *Radius* requires the more Extension, because it hath no Muscles to draw it upwards, its Motion being only *secundum pronum & supinum*. In Extension it behoves us to observe *debitam figurationem*, that the Member be extended in *ea figura quæ minimum facit dolorem*, saith Galen ; which is done, if the Fibres of the Muscles be stretch'd according to their Rectitude. Children, and such as are of a soft Habit of Body, do best suffer Extension : Elderly and dry Bodies the contrary.

In the next Place is to be considered, the most reasonable time wherein to reduce the Fractures. And herein we all agree, the sooner the better, and that to avoid Inflammation : And, according to *Celsus*, *Si in primis diebus non restauratur, inflammatio oritur, &c.* If at the first or second Day the Fracture be not reduced, it is in danger of Inflammation and Mortification : For indeed, after the second Day, it is supposed the Fracture is accompanied with great Defluxion, and so yields not to Extension, without hazard of drawing such ill Accidents upon itself.

Therefore *Fallopis*, in his Exposition upon *Hippocrates, De Capitis vulneribus*, and by his Authority, tells us what we should do in such a Case : *Si os non fuerit in suo loco, says he, ideo ad septimam, qui est primus terminus Inflammationis, vel usque ad nonam, qui est secundus, debemus bene advertere, & oportet impedire inflammationem.* If the Bone was not restored before the time of Inflammation, then we ought to attend till the

seventh Day, which is the first Period of Inflammation, or until the ninth Day, which is the second Period: And all this time we ought to restrain the Defluxion, *vel per lenitionem doloris, vel expressionem & deligationem loci.* Lenimus autem medicamentis oleosis, quæ habent vim refrigerandi, *vel per deligationem pluribus fasciis;* either by lenient Medicines, or by Deligation. We lenify with soft cooling Oils; we make our Deligation or Bandage by many Turns of the Rowlers: These are to be done until the seventh or ninth Day. Inflammation abating, gives you Opportunity for reducing the Fracture. The Instruments for Extension are threefold: First, the Chirurgeon's Hand, for gentle *Instru-*
Extension; and let him place his Hand near the Frac-*ments of*
ture, otherwise he shall hurt the sound Part by too much *Extension.* Compression, and not avail himself much in his Extension. Secondly, for the middle Extension, there are *Funes* and *Habeneæ*, a sort of Bandage fit to pluck at, in order to Extension. Thirdly, there are *Organa* and *Machine menta*, Engines used often by us, but invented by the Ancients; and they are for the most strong Extension. But before you make your Extension, consider whether the Member be not fractured in more Places than one. An old Gentleman came out of the Country, and by a Fall going down *Ludgate-hill*, brake his Right Arm a little above the Wrist, transverse, and near the Bending of the Arm was a second Fracture, oblique, This double Fracture hath happened to others in the Leg. It requires your Circumspection, lest the one escape our Sight, and the Member be left deformed, and weakned in its Action.

The Extension made, the Extenders are to be loosened *Cooptation.* gently, and the Operator must, with his Hand, endeavour as gently to press down the Ends of the Bones, and join them smooth and even together: And if there be any little Shiver that will not be placed even with its Fellows, cut upon it, and take it out. You shall know the perfect Coaptation of Parts by these Signs: First, if the fractured Member answer to the Sound; secondly, if by your handling of it you feel no Inequality; and thirdly, if Pain be abated.

2 Intention. The second Intention in curing of Fractures, is, that the Parts brought together may so be preserved; and that is perform'd by Bandage, which ought to be so made, as not only to keep the Parts so joined together, but to defend them from Inflammation. And to this Purpose I commend to you that of *Hippocrates*, from my own Practice. It consists of three Rowlers made of Linen Cloth, not too coarse, lest thereby it should offend the fractur'd Member; nor yet too soft and fine, lest it break.

1 Rowler. With the first Rowler you are to begin upon the Fracture, and take three Turns there; then rowl upward to the sound Part, and so a little higher, and there end this Rowler. It will keep the Fracture a little steady, until the other Bandage be made, and restrain the Influx of Humours which might cause Inflammation.

2 Rowler. The second Rowler ought to be as long again as the first, and must be rowled contrary to the first; as for Instance, if the first was made to the Right Hand, this must be turned to the Left; so that if the Muscles, by the first Bandage, were wreathed too much on one Side, they now may be restored again to the other. This second Rowler must begin upon the Fracture, and after a Turn or two there, must be carried downwards, that so you may press the Influx of Humours from the fractur'd Part: And so having made three or four Turns downwards upon the sound Part, you may rowl upwards again by the Fracture, and making a Circumvolution upon the Fracture itself, pass upwards until you come to the End of the first Rowler; and there *Hippocrates* terminates this second Bandage, because there is Fear of the Descent of Humours *a parte superiori*: And these two Bandages do more defend the Part from Inflammation, than strengthen the Fracture. But they being made, *Hippocrates* puts over them Compresses of Linen Cloth three or four times doubled, of such length as to reach over the Fracture, but so narrow, that five or six might be placed round about the Fracture, the Distance of a Finger one from another. These are to be spread with a little Cerote, only to make them stick. They are called *Plagulae* and *Splenia*, from their Figure, and do supply the Defect of agglutinative Medicaments,

and

and lessen the Pain, by hindering the Compression of the Bandage.

The third Rowler of *Hippocrates* fastens the said 3 *Rowler*. Compresses, and its first Turn is made upon the Fracture, the one Head being carried upwards : And you are to take Notice, that the Bandages are to be drawn more streight upon the fractur'd Parts than elsewhere, that the said Parts being more weak, may be kept from Defluxions.

Celsus in his Eighth Book and Tenth Chapter, proposes another Way of Bandage. First, he dipt a Cloth *Way of* in Red Wine and Oil, applied it over and about the *rowling*. Fracture, and over that he brought six Rowlers, his two first being those of *Hippocrates*, and so he rowled them; then he used a broad double Linen Cloth, spread with Cerote, to keep them close down : And his Reason is, because the fractur'd Bone hath always a Propensity that Way, whither it tended when fractur'd; therefore, saith he, you are always to put a Compres of Linen Cloth, dipt in Wine and Oil, *ei parti quæ contraria est parti in quam membrum inclinat*; and over this he brings the four remaining Rowlers, so as the following Rowler be rowled contrary to the former, and the third end *in inferiori parte*, in the lower Part, *relinquæ omnes in superiori terminum habeant*, all the rest end above.

These are the Bandages of *Hippocrates* and *Celsus*, Men of the greatest Authority in Chirurgery, and are followed almost by all that have writ since, and are of excellent Use in Fractures in and near the Joints, where there is Fear of Inflammation: But then in your Binding you must observe such a Mean as consists with the Ease of the Member bound. A small and lax Tumour appearing at the Extremity of the Member a Day after, *good Band-* is a Sign of good Bandage; but if there be no Tumour, *signs of age*. or if the Swelling be great or hard, then the Bandage is naught; the first shewing the Bandage not to be streight enough, and the last too streight; therefore you should often visit your Patient, to inform yourself how the Bandage is.

But if no Accident happen, you shall not unbind the *Fracture* until the seventh Day; and then, if all be well, *loosen* the Bandage will begin to slacken of itself; and if it *Bandage*. be not well, you may then see your Error, and timely

help it : And that is one Reason why Fractures should be opened about that Time. Another may be, for that often in Fractures there is an intolerable Itching, thro' the Detension of Humours, which are made sharp by Deligation (Perspiration being thereby hindred) and that is wont to terminate in a most painful Excoriation and inflamed Redness. In which Case you are to bathe the affected Part with warm Water, that the Matter may be evaporated, and then the Member is to be bound up again : But here you are to put *Ferulae* or Splints instead of the *Splenia* or Compresses : Whereas in Fractures with great Contusion, or in and near the Joints, I have continued the Use of Compresses wet in Whites of Eggs, during the whole Cure, with good Success : *Observat.* And lately, a Youth about ten Years of Age, labouring under a Carious Ulcer in his Foot, the last great Frost brake his Thigh-bone, according to the Length of the Member. This Fracture was cover'd with *empl. è bolo* and *Splenia* moisten'd in *album ovor.* with Bandage, &c. as is proposed in this Treatise, by which the fractur'd Bones were kept even and close together with much Ease to the Child, and agglutinated firmly by the *Callus* intervening. Mr. *Towel*, sometimes a Servant of mine, set his Thigh-bone for me, I being at that present otherwise employed.

But all the Ancients, after the Seventh Day, did use Splints ; and so have I where they might safely be used : For they not only keep the Member steady, but streight. And of these, some are made of Tin, others of Scabbard, Pastboard, and of Wood, sewed up in Linen Cloths. Those of Tin do very well, by reason of their Lightness. Those of Scabbards are apt to bow, and so those of the thickest Pastboard, especially if they chance to be wet : And those of Wood are heavy, and apt to inflame the Member : Yet, thro' the Artist's Care, they may be all used with good Success ; yea, from the first Day of the Fracture. As in the Case of a Reverend Divine, who brake both the Focils of his Left Leg, within a few Fingers-breadth of the Ankle. This Person laboured under an *Asthma*, which grievously shook the fractur'd Member ; wherefore I was necessitated to put on *Ferulae* the very first Dressing, which I continued the Use of during the whole time of his Cure. Ho lately

lately told me, that he never felt the least Pain in that Leg since I took off the last Plaster, which is more than ten Years since : But *Hippocrates* used them not until the seventh Day ; for before that Day there was more Need of hindering the Inflammation, than of strengthening the Fracture, *post septimam contra*, but afterward the contrary is required.

The third Intention in curing of Fractures is, in preserving the Tone of the Part. *Natura enim os unire nequit, nisi pars sit sana*; Nature cannot knit the Bones while the Parts are under a Distemper ; and that cannot presently be removed : For tho' fractur'd Bones be very well set, yet there will remain some *Cavernulae*, which will be apt to fill with *Sanies*, which the Part thro' its Weakness, can neither well assimilate nor expel, and so is like to be burthened with Excrementitious Humours. Therefore Phlebotomy may be here of special Use, and the keeping of the Belly soluble by Clysters, or otherwise ; and a slender Diet must be prescribed. This is the Work of the Physicians. But they not being always at Hand, I thought fit to mention it, and so to proceed to our own Work, in keeping up the Tone of the Part : And hereto we have need of such Medicines, *quaæ materiam influxam desiccant, & inflammationem repellunt*, which dry up Serosities, and repel Inflammation : And these, in a Word, are *Astringentia*, of which we have Choice. *Hippocrates* used Cerote, and Red Wine : *Celsus*, as you have heard, used Oil of Myrtils and Roses, Red Wine, and Whites of Eggs together ; others again used Whites of Eggs alone ; and others added Oil of Myrtil, *balaust. ros. rubr. sang. dracon. bol. Armen.* and, with a little Wine, made it up to the Consistence of a Liniment, and applied it upon Cloths over the Fracture. By the Use of this latter Medicament, I cured a Man whose Arm was sore bruised, and fractur'd in many Pieces, by the Fall of a Piece of Cannon which brake loose in a Storm, while we were preparing to lay aboard our Enemy. Over this Restrictive I applied *Splenia* of double soft Linen with Bandage, as in compound Fractures, and happily cured him. If the Inflammation be not great, I then take *empl. diapalmae*, and some of the forementioned Powders, with a little Oil of Myrtil and Vinegar, made up

up to the Consistence of an Emplaister, which I spread upon Cloth pretty thick, and apply over the Fracture. It not only restrains the Defluxion, but strengthens the Fracture. The Medicaments proposed are all very good, and excellently preserve the Tone of the Part, if they be proportioned according to the greatness of the Malady.

*Position of
the Member.*

There is yet farther requisite to the Performance of this Intention, a right Position of the Member; and that, according to Galen, *debet esse mollis*; the hurt Part ought to ly soft: For that hard lying presses upon the bruised Bones and Flesh, and causes Pain and Inflammation. *Debet esse equalis, ne distorqueat*: It must ly smooth or equal, because an uneven Placing distorts or draws awry the Part. *Sursum versus, ne humores descendant*: It should ly somewhat high, lest a painful Defluxion fall upon it. *Oportet congruam membra figura-
tionem considerare*: It behoves, saith Hildanus, to consider the convenient Figure of the Member, that the Muscles be kept in their right Site, which is most free from Pain. *Hæc autem est figura media*; which, if it be not observed, *exiguo post tempore membrum dolere solet*. What those Pains are, you may possibly gues, but no Tongue express: Therefore you ought to handle the Member very tenderly; and if the Fracture be made in *Cubito*, place it in a Case made of Pastboard, with a soft Pillow under it, and bring it up to the Breast with a fine Towel, or the like: But if it be the Leg that is fractur'd, we then place it in a Bed, or in a Cradle, or upon a Pillow quilted in the Middle with Junks, to support it, having a special Care that the Hollow of the Ham and Heel be filled up, lest the Weight of the Foot hurt the Heel, from whence grievous Pain doth ensue, and sad Accidents may follow, as at large you may read in *Fabr. Hildanus*.

4. Intention The fourth Intention is *Callum generare*, to make *Callus*; which is to be endeavoured after the Fear of Inflammation is over, *quia natura patris lœsa non potest Callum generare*; and that ceaseth *circa diem septimam*, about the seventh Day, sooner or later: And if, after that time, the Fracture be to set, *possunt diversa & mala accidentia generari*, saith Vigo: Yet after the seventeenth Day of the Fracture, I have set the Thigh-bone, and cured

cured the Patient, without any ill Accidents. He is yet living to testify it.

How the *Callus* is made, you may read at large in *Fallopius*, in his Exposition of *Hippocrates*. And tho' it be not Bone, it is so hard, saith he, that if the Member hap again to be broke, *potius in alia parte frangitur, quam ubi Callus est genitus*, it breaks any where rather than in the *Callus*.

Two Things are therefore required : First, that it be supplied with fit Matter ; secondy, that that Matter be not washed from the Edges of the fractur'd Bones, *aut foras evocetur*, saith *Galen*. As for the Matter to make *Callus*, most Authors do agree, that there be a greater Liberty in Diet. *At quo tempore* (saith *Galen*) *Callus* *gignitur, nutriendum corpus est cibis boni succi & qui mul-* Diet for the
tum nutritant : And that must be viscous : His Reason *ingendring* is, *quia ossis alimentum crassum* : And for that Reason of *Callus*. Authors commend (at this time) Offal of Flesh, and Broths of Kid and Veal, and the like, boiled with Rice or Wheat. They also allow sweet Wines : But this Liberty in Diet, I think, is better forborn, for thereby we often see great Obstruc^{tions} arise, especially there where our Patients are inclinable to feed plentifully. Therefore, in such Fractures where the Patient is constrained to keep his Bed, I propose a slender Diet, and of such things as are of easy Digestion ; for without that Liberty surely we cannot fail to complete our Cure, the Bones having naturally a Poriness in them, in which is always contain'd a Matter fit for their Nourishment ; and, *ex illo ipso nutrimento in fracturis generatur Callus*, of that Nourishment *Callus* is made : So if we be careful to prevent Inflammation, and the like Mischiefs, which disturb Nature in her Actions, and apply such Remedies as may dry the proper Nourishment into *Callus*, we shall not fail then of our Desire : And those Remedies, according to *Galen*, ought to be emplastick, and moderately hot. For, saith he, *Ea Callos tum promovent, tum augent : Quæ digerendi vim obtinent, ea magnos jam Callos diminuunt*. Therefore it behoves us with Care to fit our Medicines to the Age and Constitution of our Patients : For those which are proper for Men of ripe Age, if applied to Children and tender Bodies, would so dry the *Callus*, that they would quite diminish it, and frustrate

frustrate our Cure. In Children, *Albusasius* commends to us the Application of Whites of Eggs alone, or with a little *farina volatilis*; in those of more Years, *pulv. myrrhae, alves, acaciae, cum tragacanth.* thus, *labdanum, &c.* *Emplastrum strict.* *Paracelsi. diapalm. oxycroceum,* severally, or mixt, are proper. But this latter *Vigo* is very angry with, and says, it is a diabolical Emplaster, too hot for the Summer, and not very proper for the Winter. *Vigo's Emplastr. ad ossium fracturas* is excellent, and so is our *Catagmaticum* in the *London Dispensatory*. As to internal Medicines, there are many, but I shall only recommend to you *Osteocolla*, and that by the Authority of *Fabr. Hildanus*, who often experienced it. The Dose was *3j. in aq. rad. symphyti*; and with this, so given, he cured a compound Fracture in one above sixty Years of Age. *At in juvenibus & succulentis non putat convenire osteocollum.*

Thus I have proposed fit Materials for the Generation of *Callus*; Now, lest that the Matter of which it is to be generated, should be hindred from thrusting forth; it behoveth you to alter the Bandage, the Member not requiring to be rowled now so streight, by which Means the nutritious Juices will have Liberty to flow in, and there, by gradual Digestion, to thicken into a *Callus*. In taking off your Dressings, you are to consider, whether the *Callus* generated be such as is required. How the Fault of the *Callus* is to be remedied, if it be greater or less than it should be, you shall hear presently.

If the Fracture be simple, whether transverse or *secundum longitudinem*, they are cured by the same Methods, only these latter require a more strict Bandage, otherwise the Bones will be apt to rise and make a gibbous Member.

The fifth Intention is, the correcting of those Accidents which, happening in Fractures, retard their Cure; and they are many, as, Pain, Inflammation, Apostemation, Gangrene, Itching, Excoriation, Callus more or less than should be, Weakness of the Member, and depraved Figure. If Pain invade the Place, then Lenients are proper, and such Remedies as restrain Defluxion, and hinder Inflammation; of which Sort I have mentioned some, and for more Variety refer you to those which

which are set down in the Chapter of *Phlegmon*. If Gangrene appear, slacken your Bandage, and foment the Part with a *Lixivium*, in which have been boil'd *scordium, absinth. centaur,* and the like. You may also apply over all, a *Cataplasm* of Barley-meal, Lupines, with the Addition of such Ingredients as have been prescribed in the Chapter of *Gangrena*. But if Itching affect the Part, then foment it with warm Water, which will give a Breathing to it by the Pores; or with Salt-Water, *qua propter salem expurgat & poros aperit.* The Itching neglected, is wont to terminate *in excrationem dolorosam*: In a very painful Excoriation, *cui occurrentum est exsiccantibus & refrigerantibus;* such are *unguent. alb. camph. nutritum, populeon, &c.*

As to the *Callus*, it is sometimes just, sometimes greater or lesser than it ought. If it be too great, you will perceive it by its bunching out; as also, it will be painful to the Touch or Pressure; and besides, it renders the Part unapt for Motion. In this Case abate the Patient's Diet, make your Bandage more strict, and foment with Discutients, also apply *empl. de cicuta, de ranis cum Mercurio, &c.*

But if the *Callus* be less than fit, the Signs are, *quod ad motum redditur debilis*, the Bone is weak; and if the *Callus*. Part be toucht, you scarce feel the *Callus*. And this was thought, by the Accidents, to proceed from Slenderness of Diet, or that it was not enough incrassating: But I think it rather proceeds from improper Applications, or too streight Bandage. Yet if the Patient be in Years, and of a spare Body, you may both increase and incrassate his Diet; but withal slacken your Bandage, and invite forth the Humours by warm Water, not too hot, *donec pars rubescat, & in tumorem attollatur*, until the fractur'd Parts a little swell, *tunc enim desistendum.* But if the Member be extenuated, it is either from the too strait Bandage, or overmuch bathing with warm Water; therefore you must now bath with fresh Broths, and other good Embrocations; also, a Pitch-Plaister applied, and presently pulled off again, will, by its Adhesion to the Hair and Skin, caufe Pain, and likewise an Attraction of Aliment to the Part, and so the Member may be nourished.

Some-

Sometimes also after the Fracture is cured, the Member is found to be of a deprav'd Figure, by reason the Bones were not well set, or thro' ill Bandage, or some inordinate Motion, *aut propter inscitiam Chirurgi*. To resolve this *Callus*, some Authors have adventured to prescribe sundry Medicaments, but they have hitherto proved unsuccessful: Yet, if it be true what a Chirurgeon lately affirmed of *empl. de minio*, the Work would be very facil. But *Celsus*, and *Fabr. ab Aquapend.* after the prescribing various Remedies, conclude at last thus: If the Patient be young and lusty, and the *Callus* but six Months old, there is yet one Refuge, that is, *fracturam de novo rumpere*; and in order thereunto, you are to foment the Part with Decoctions, *ex althaea. rad. lilior. fol. malvar. taps. barbat. cicuta, &c.* and then *rursus os frangitur manibus vel digitis, impellendo seu compri-mendo*: But if the *Callus* be so hard, that it yields not to your Hands, then (says *Fab. Aquapend.*) *frango eum instrumento attrahente in diversas partes*. But this *Albuafius*, a Chirurgeon as bold as any, and one that had seen the Effects of such rash Undertakings, utterly con-demns, saying, It is *operatio valde vituperabilis, perdu-cens ad mortem*; therefore he adviseth the Patient not to give Ear to such vain People, but rather content himself with such Help as emollient Decoctions, Liniments, and Emplaisters, may effect: Which in truth is safer, if you consider, that after the *Callus* is so confirmed that it will not yield to Extension, then, if you should break it anew, or any other Way separate it, yet it would no more yield to a right Coaptation, than a Hair-lip, or my two Fingers will to Agglutination, without separating the Callosity; which is not possible to be done in Bones.

I could have here inserted many Instances of my Work, in the Cure of the several Fractures of partic-u-lar Parts; but it would signify little more than I have already written, their Cure consisting in the very same Extension and Coaptation, and they being subject to no other Accidents than what I have set down: All which I have writ as plainly and feelingly, as if I had been performing the Work in your Presence; yet, as a Ra-rry, I shall give you one Instance.

Some Years before the Fire, I was sent for to a poor 1. Observe Widow, inhabiting near Bridewell, whose little Son, of a fracture of about eight Years of Age, playing about the Wharf, sur'd Face. was struck, by one of those great Cart-Horses, full in the Face, beating the *Ethmoides* quite in from the *Os Cribiforme*, without any great Wound. The Boy lay for dead a while, and dozed longer. It appeared a strange Sight at first to me, his Face being beaten in, and the lower Jaw sticking out ; nor did I presently know how to help him, or by what Art to make my Extension : But, after a while, he a little recovering his Senses, was persuaded to open his Mouth, and there I saw the *Os Palati* and *Uvula* beaten so close backwards, that it was not possible for me to get my Finger behind, as I designed ; and other way of Extension there was none : Upon which I presently formed an Instrument bended up at one End, by which I got up behind the *Uvula*, then raising it a little upward, pulled it forward, with the Bone, into its former Place, very easily ; but I no sooner let go my Extender, than the fractur'd Body returned back again. I then contented myself in dressing up the Face with a restrictive Cerote, to prevent the Influx of Humours, and let him blood, and within a few Hours after, caused an Instrument to be made, where'y the great fractur'd Body was more easily brought into its natural Place, and also kept there by the Hand of the Child, his Mother and my Servants helping him some while, other way there was none. Thus by their and our Care, the Tone of the Part was preserved, and a *Callus* thrust forth, which, as it hardned, the Part grew stronger, and the Face was restored to a good Shape, better than could have been hoped for from such a Distortion in that Place. The Patient is yet alive, and well.

A Page attending a Noble Family, riding behind the 2. Observe Coach, fell down, bruised his Face, and broke his of a fracture Right-Collar-Bone. He was taken up, and carried to sur'd Clavicle, &c. the next Pretender to Chirurgery, who seeing his Face much swell'd, and his Nose bloody, concluded it fractur'd, and fill'd up his Nostrils with Tents, binding them up with Plaisters ; and finding his lower Jaws standing unequally with the upper, concluded them luxated,

ated, and that Part of the *Sternum* under the Collar-bone was broken down. Things being thus represented, I was sent to view this Youth, and pulling off the Plaster, and Tents out of his Nose, I saw neither Wound nor Fracture. His Jaws did not answer equally to one another; but, by his frequent Motion and champing with them, it was evident they were neither luxated nor fractur'd: But by his Fall, the Bones of his Face seem'd to be press'd inward, and the uppermost Jaws were crushed nearer one another than they should; and this made the Inequality, which our Chirurgeon thought a Fault, in the lower Jaws, and by his pulling them, had like to have broken or dislocated them. The next Day he called in a Chirurgeon to justify his Proceedings: But there appearing nothing of Luxation or Fracture in the Jaws, we looked upon the *Sternum*, and found it well, but that Collar-bone was broken oblique, which we set and bound up, with Resolution not to open it till it should be united. All things being in this hopeful Condition, we advis'd him to keep his Bed, and left him to observe the Directions of his Physician, by whose Prescription a Clyster was administred that Evening, which he voided into a white Earthen Chamber-pot, which his Chirurgeon looking into, call'd it Blood, and alarm'd his Friends. But a discreet Person looking afterward upon it, concluded it only the Clyster tinctur'd with red Sugar, *Hiera-picra*, &c. I being soon after fetch'd, confirm'd the same, and appeas'd that Clamour. About the tenth Day, our Chirurgeon, contrary to the former Order, undressed the fractur'd Clavicle, upon whose binding it too slack, the Bone started, and from that Time it grew painful; so that he dressed it again four or five Days after; but the Pain increasing the more, I was fetch'd, and upon opening, saw one End of the Clavicle riding over the other, and pricking against the Skin. The *Callus* being confirm'd, the Patient was removed from his Chirurgeon's House to his Mother's in the City, where being in great Pain, his Chirurgeon dressed him again, and the straiter he made the Bandage, the greater was the Pain. He not imagining the Cause, imputed the Fault to the Unruliness of the Patient, and declared that the Fracture was yet in the Bone, and that it was incapable of Cure. Upon which I was sent for, and seeing the

the Pain to proceed from the End of the fractur'd Bone pricking in the Skin, and the more when it was bound, I caused Half a Walnut-shell to be plaster'd over it; and having thereby defended it from Pressure, he made use of his Arm, and complained no more of Pain. I then design'd to cut off that End of the Bone if it pain'd him agaim; but from that Time it continu'd easy, and he recovered the Use of his Arm very well.

Thus have I done with that which concerns Simple *Compound Fractures*. In a Fracture with a Wound, if neither the *Fractures*, Bone be bare, nor yet prominent thro' the Skin, then you are by Extension to bring the fractur'd Ends of the Bone together, as was proposed in the first and second Intentions of Simple Fractures: And the Lips of the Wound are likewise to be brought together by Suture, if it be any whit large, and not too much contused: Which Manner of Dressing is contrary to what is taught in Gun-shot Wounds with Fracture, the Method being to be altered upon that Occasion, for the Reasons there alledg'd. Then endeavour, as in our third Intention, to keep the fractur'd and wounded Parts together by Dressings, which may as well mitigate the Pain, as keep off Apostemation, by repelling the Matter flowing to the Parts, and drying up that which already affecteth the Fracture and Wound: *Qualia sunt Astringentia*, that is, by Astringents, with which I have sufficiently furnished you in the Discourse of *Simple Fractures*. *Galen*, by the Authority of *Hippocrates*, recommends Cerote of Roses. But if there be no Pain, you are to endeavour the strengthening of the Fracture, and preventing Defluxions, by Cloths spread with that Composition of astrin-gent Powders, mix'd with the Whites of Eggs and Red Wine, which is already proposed: Then follows Deligation of the Part: And in this Case Bandages are to be made of softer and broader Linen than we use in Fractures without a Wound, that they may comprehend both the Lips of the Wound, and keep them down, yet not hurt them by too hard Compression. *Minus astringenda sunt fasciae quam si vulnus non adesset*, says *Celsus*: And therefore it is that *Hippocrates* and *Celsus* make so many Circumvolutions: *Cum melius sit saepe circumire quam astringere*, saith *Celsus* again: The third Day they loosen the Bandage; then *ferulae* *ce!*

ferulae vel non aponendæ, ne vulnus comprimant, saith *Albuscius*; or, if they be put on, *super vulnus apponi non debent*. Rather in these Fractures do we use Deligation, *pluribus fasciis*, with many Rowlers, saith *Albuscius*; and so all along he proceeds in his Discourses of Fractures, as if he had been rather breed under *Hippocrates* or *Celsus*, in *Greece* or *Italy*, than where he was: But in truth, this Way of Deligation is not only troublesome to the Chirurgeon to put on and off, but so very painful to the Patient, that it is almost impossible that he should ever be without a Fever, if his Wound be every Day to be so rowled and unrowled. Therefore in these compound Fractures we chuse rather to follow the Method of some of the Moderns, who, instead of these many long Rowlers, make Choice of two or three short Cloths, folded three or four times double, to give them the more Strength. We also make them of such Breadth, as to encompass the Lips of the Wound and the fractur'd Parts, and of that Length as to come once about the Fracture, and so stitch together on the most convenient Side. And under these may be placed Compresses of fine Tow, or double Cloths; which will not only keep the Lips of the Wound down, but fill up the Inequality, and further the Expulsion of Matter; and so the Wound may be drest, and the fractur'd Member reliev'd at your Pleasure, without giving the Patient the Pain to have the fractur'd Member remov'd, or yourself the Trouble of rowling and unrowling so many long Rowlers as the Ancients proposed. With this Method I have cured Arms and Legs, so shattered by Splinters from Cannon-shot, and with such Loss of Substance, that I even despaired of their Cure. But in some of these I have made use of *Hippocrates's Plagulae*, and often, for the more strengthening the shatter'd Member, have been glad to make use of some Splints from the first Day; but so as their Compression was gentle and equal, and so placed, that the Lips of the Wound might be kept even, and that the Discharge of Matter was by them further'd: But if the Wound be transverse, it then requires more Caution, lest the Matter should at any time be prest back into the Wound, and so not only dilate it, but foul the Bones.

Thus

Thus much for a Fracture with a Wound where the Bones are not exposed to the Air : But if the Bone be bare, and thrust itself out of the Wound, you shall endeavour presently to reduce it ; and after it is restored to its natural Place, let the Wound be stitch'd and dressed, as I proposed to you even now in the Compound Fracture.

A Commander at Sea, valiantly fighting in the midst of the Enemy's Fleet, had his Leg fractur'd by the Fall of his Mizzen Top-mast, it breaking his Leg transverse near the Ankle, the Edge of the Bone thrusting out thro' the Skin. He not suffering the Bone then presently to be set while it was warm, afterwards, when it was swelled and stiff, it did not yield to Extension, but became painful and inflamed. After some few Days he was brought to London, and I was sent to him. He was of an ill Habit of Body, subject to the Gout and Dysentery ; and the Fracture being accompanied with great Defluxion, was not in a Condition to admit of Extension : Therefore, according to *Fallopious* and *Hippocrates*, before cited by me in this Treatise, I proposed to his Chirurgeon to proceed by Lenients, to mitigate Pain, Inflammation, &c. and by Bandage to hinder Defluxion ; which we did, and his Chirurgeon continued that Method a few Days, by which the Accidents were remitted. When we met again, finding the Patient in Ease, we took off the Dressings, and agreed to make Extension, and reduce the Fracture. The Patient was of a dry tough Body, and the Member yielded difficultly to the Stretch ; upon which Consideration we satisfied our selves with a moderate Extension, doubting that, upon a more forcible one, ill Accidents might follow, (as an Inflammation presently did). We dreft it up as a Compound Fracture ; and after some Days Dressing, a *Callus* thrust forth, and united the Bones. That *Callus* being confirmed and dried, we hasten'd the Exfoliation of the foul Bone by a little *Egyptiacum* and *pulv. myrrhae* dissolved in *spir. vini*, applied hot upon an armed Probe. Thus the Bone was exfoliated, and the Ulcer cured by the ordinary Intentions in such Cases ; yet the inward leaning of the Bone continued a Weakness in the Member a long time, as is usual where the Fracture hath not been timely or well reduced. To remedy this, I caused

3. Observ.
of a frac-
tur'd Leg.

a Bar of Steel to be fix'd in his Shoe with Joints, and by a Bracer of Cloth to be laced on, or tied with Ribbons on the Outside of his Leg, by which it was marvellously strengthened.

But if the End of the bared Bone do chance to thrust itself so out, as that without great Force it cannot be restored to its Place, *tunc e duobus malis minus est eligendum*, then that End of the Bone which hath thrust itself so far out, is to be saw'd off: And if this be done timely, before a Gangrene hath seized upon the Part, it may be performed with good Succes.

In St. Clement's Parish, behind the Church, some Years since, while I was one Evening preparing my Dressings for the setting of a fractur'd Thigh-bone in a little Child, I was hastily fetch'd to assist one Mr. Powell, a Barber-Chirurgeon, in the setting of a Fracture of both the Focils of the Leg in a Man about sixty Years of Age, of a tough dry Body; there I met Mr. Tatham, an industrious knowing Chirurgeon. The Fracture was oblique, almost *secundum longitudinem*; and the *Os tibiae*, or greater Focil, had shot itself out by the Inside of the Ankle a great Length. We endeavoured, by a strong Extension, to reduce this fractur'd Bone into its Place; but it yielded very difficultly to our Endeavours, yet we reduced it, and afterwards cleansed the Wound of what Shivers or Pieces of Bones we met with, and brought the Lips of the Wound together by Suture, hoping thereby to keep the fractur'd Bone the closer. Then we dress'd the Wound with our Digestive warm, and with an *empl. diachalcit.* malax'd with *ol. ros.* and over the fractur'd Parts we applied the Mixture following spread upon a double Cloth: *R flor. ros. rubr. balauſt. baccar. myrtill. bol. Armen. sang. dracon. an. q. s. pulveriz. cum albumin. ovor. ol. ros. & acet. Misc. ad consist. mell.* This we fasten'd by Bandage, as hath been shewed in Compound Fractures; and for the more strengthening the fractur'd Member, we placed *Splenia* over that Bandage, with *Ferulae* upon them; and having fasten'd them by three Ligatures, we placed the Member as much to the Ease of the Patient as we could contrive, upon a Pillow quilted in the Middle, with Junks to keep it steady: But these great Fractures, with large Wounds, and near the Joint, are always subject to grievous Pain; and this much more, for that the

Tendons

Tendons and muscular Flesh were sorely torn, and stretcht by the great Extension, so it was not likely to be attended with less Mischief than afterward befel it. We let him blood that Night, and gave him an Anodyne Draught to dispose him to rest; but he slept little, his Pain continuing with much Disturbance: A Fever also followed, and within two or three Days he became delirious, and in the Absence of his Attendants got out of his Bed; upon which the great Focil flew out, as at first, and the poor Man fell down on the Floor as half dead. We were both presently fetch'd, and taking off the Dressings, we saw the Bone distorted, the lower Stitches broken, and the Wound of an ill Aspect, as it were tending to Mortification; also the Bone thrust out so far, that there were no Hopes of its being any more reduced by a new Extension: Upon which Consideration, we resolved to saw off the End of it, and to that Purpose having prepared all things ready, we cut out the remaining Stitches, and turn'd the Foot on one Side, towards the Small of the Leg, thrusting the Bone more out, the one sawing the End off, whilst the other, with a *Spatula*, defended the Tendonous Flesh underneath from being wounded by the Saw. That done, we cleansed the Wound from the Saw-dust, as also from the Shivers of little Bones which we had not discovered in our first Dressing, they lying pricking the Perioftæum, between the fractur'd Bones and Membranes, by which those sad Accidents had been hastened. The Wound thus cleansed, we turned the Foot right into its natural Place, there being no Need of Extension; which being done, we scarified the Lips of the Wound, and wash'd them *cum spir. vini*, with a little *Ægyptiac.* dissolv'd in it, and applied to the Ends of the Bones, Pledgits dipt in the same, and prest out. We also drest the rest of the Wound *cum unguent. basilic.* with a little *ol. terebinth.* warm, and applied a Mixture of an *Emplastrum Paracels.* and *diachalcit.* over the Wound and Parts about, and then a Compress and Bandage over that, as in Compound Fractures. The great Work was now, how to support the Foot, and keep it even with the rest of the Leg, there being so great a Distance between them without any Bone. But we having placed the Leg upon a quilted Pillow, laid him again in

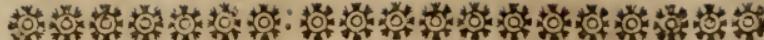
his Bed, and fitted it in a Wainscot Case, where it was kept steady and equal, and lay conveniently for our daily dressing him. This done, we committed him to the Care of his Friends, to keep him there quiet, and ordered him Cordial Juleps, &c. After some Hours we let him Blood again. From that time his Pains lessened, and his Fever and other ill Symptoms went off as the Wound digested : But after some Days the Heel became very painful, and a Slough was discovered to us inflamed with an Ulceration sticking to the very Bone. The Patient not permitting to have the Case, wherein his Foot and Leg was, stirred, it had not been raised up, as for Prespiration it ought to have been ; whence this Ulcer became very troublesome to us. For a present Relief, we laid him upon his Side, and dressed the Ulcer with Linients, to hasten Separation of that Eschar. And because the Patient grew soon weary of his Position, which also was inconvenient for our dressing the great Wound, we therefore designed an Instrument of Tin to receive his Foot and Leg, his Heel to ly hollow in a Place cut for that Purpose, whereby we could daily dress it without disturbing the Patient, only placing him down lower towards the Bed's Feet, that the Heel might ly over it. The Side of this Instrument that came up by the Wound, was to be taken off at the Time of dressing his Wound, and afterward placed close again ; whereby he was dress'd without disturbing the weak Member. It lay also soft, by reason of the Folds of Linen we placed under and between the Leg and Instrument ; it was also kept strait, in hopes it might be supplied with *Callus*. But the Wound became sinuous, and the Matter fouling the Bones, hinder'd the Growth of *Callus* ; and while we waited for Exfoliation, the Lips of the Ulcer became callous, which prolonged the Cure. The Ulcer in the Heel we digested ; and after we found the Bone would not incarn, we dress't it with *Unguent. Aegyptiac.* with a little *Merc. subl.* dissolv'd in it ; by which Dressing we hasten'd the Exfoliation of the Bone, and cured the Ulcer. The Wound above was a larger Work ; but after the Generation of *Callus*, it cured as a *Fistula* with carious Bones, the Patient lived many Years after ; but thro' the ill Disposition of the Ulcer, the *Callus* was hindred in its Growth, whereby the Leg remained the shorter,

shorter, almost as much as had been sawed off of the Bone. Yet this was better, I suppose, than to leave the Bone distorted until Digestion, as in such like Case I have seen done. But if the Bone be not so much distorted as that you may come to saw off the End of it, or if you cannot reduce it after the ordinary Way, then you may, with a Chisel-like Instrument thrust between the fractur'd Ends of the Bone, and use it after the Manner of a Lever, for the Reduction of the Prominencies. But then it is supposed these fractur'd Ends of them are within the Wound, and have not much overshot one another, and the Fracture is transverse or oblique, otherwise this Way will do no Good ; nay, may possibly rive up the Piece of Bone, and make another kind of Fracture, and grievously pain the Patient to no Purpose. And that you may easily do, if the Ends break off upon your hard and unsteady Extension. Therefore it becomes you to be very wary in making this Extension ; else, I say, you may put the Patient to sad Pain, and do him little good.

But to conclude, after your Extension is made, and the Bone reduced, you are to feel if there be any Shivers of Bones loose, and pull them out. And if you perform this Operation in a Fracture newly made, then you are to prevent Inflammation and all other Accidents, by dressing up the Patient with such Medicines as have been proposed in Compound Fractures, and make your Bandage so that you may come to dress the Wound, as Occasion shall offer, with as little Molestation of the fractur'd Member as is possible, having a Care you grieve not the tender Parts with Splints, until the Inflammation be over, and the Wound well digested.

Then afterwards, 'tis to be endeavoured, that the Bones robb'd of their Periostæum may again be incarned or exfoliated ; which is the Work of Nature, yet ought to be help'd by Medicines which have a manifest hot and drying Quality, and a peculiar Faculty thereto, of which there are enough set down in the Treatise of *Gun-shot Wounds*.

The Bones exfoliated, the Cure of the Ulcer will succeed of Course, or may be performed by Epuloticks, of which you may have Choice in this Book.



C H A P. II.

Of Luxations in general.

IN several Observations in this Book I have had Occasion to take Notice of the Inconvenience many People have fallen into thro' the Wickedness of those who pretend to the reducing luxated Joints, by the peculiar Name of *Bone-Setters*, who (that they may not want Implyment) do usually represent every Bone dislocated they are called to look upon, tho' possibly it be but a *Ganglion*, or other crude Tumour, or preternatural Protruberance of some Part of a Joint. In which Cases their rash Extensions do frequently cause sad Accidents: But their more gainful Way is by extending and dressing up Joints rather wrench'd than dislocated; in which if they escape undetected, they must needs reap great Credit, the Patient recovering so soon the Ease and Use of them. Whereas if the Joints happen really to be luxated, scarce one of them knoweth how to reduce them. In Consideration of this daily Abuse, and the Inadvertancy of the young Chirurgeon, whose not timely discerning the Luxation, renders it more difficult to reduce, I have thought fit to say somewhat to this Part of Chirurgery, and first, in general,

Connexion of Bones.

He that will give an Account of *Luxations*, and the Manner of their Cure, ought first to describe the Connexion of the Bones to each other; on the divers Manners of which depend the great Variety of Methods in reducing and handling of them. These Connexions we find to be of two Sorts: 1. *Sympysis*. 2. *Articulatio*.

Sympysis.

1. *Sympysis* in its Original Signification denotes a *Cinnascency*, or *growing together*, and perhaps is meant of those Bones which in young Children are distinct, but after some Years, unite and consolidate into one Bone. So the *Os ilium* and *Os pubis* are two distinct Bones

Bones in a Child, but unite into one in a Man. The *Epiphysis* of the *Os femoris*, is a distinct Bone from it in a Child, whereas in a Man they do intirely unite. But Custom, and the Usage of Authors, hath found out another Sense of the Word, fitted to adult Persons, in whom it is used to mean such a Connexion of two Bones together as is immovable ; and of these are two Sorts.

I. An immediate Conjunction, or Juxtaposition (if I may so call it) without the Interposition of any other Body : Of which we find three Species.

First, *Sutura*, or the indented Conjunction of Bones in the Scull.

Secondly, *Harmonia*, when without tothing or interfering, they do join immovably in a streight Line, as the Bones in the upper Jaw.

Thirdly, *Gomphosis*, or the Connection of a Tooth to its Socket.

2. Mediate, where the Connection is made by Interposition of another Body. Of these we likewise find three Sorts, which, notwithstanding, are not so peculiar to the *Sympysis* as it is opposed to *Articulatio*, but that they may be found in that also : They are these that follow :

First, *Syssarcosis*, when two Bones are joined together by the Intervention of Flesh. An Instance of this in the *Sympysis* is, the Conjunction of the Teeth to the Mandible by the Flesh of the Gums. In Articulations we see it in the Elbow, or any other Joint, where one Bone is connected to by another Muscles.

Secondly, *Synneurosis*, when the Connection is made by a Ligament. Of this in *Sympysis*, we find Instances in the Connection of the *Offa pubis* together, especially in Women, by a ligamentous Substance. In Articulations it is either round, as that which unites the Head of the *Os Femoris* to the *Coxa*, or broad, as the Tendon of the *Patella*, which unites it to the *Os tibiae*.

Thirdly, *Synchondrosis*, which is an Union by Gristles. A *Sympysis* of this Kind we have of the *Sternum* to the Ribs. Articulations are most of them so joined, there being few Bones destin'd for Motion which have not cartilaginous Heads for the Facility thereof. These two latter Sorts of Union are compounded in some Articulations, as in the *Offa coxae*, where you

have Tendons and Gristles both to join them together. This is by Galen called *Neurochondrosis*.

Articulatio II. *Articulatio* is a Connection of Bones with Aptness of Motion. Something hath been anticipated already concerning this Head, because of its Coincidence with *Sympysis*, in the forementioned Instances. But take it as it is in itself, and you will find it to have this Difference. There is,

1. A conspicuous Motion, which, where it happens, the Conjunction is called *Diarthrosis*, as in the Elbow, Thigh, and Knee.

2. An obscure one, where the Conjunction is called *Synarthrosis*, as in the joining the *Carpus* to the *Metacarpus*, the *Tarsus* to the *Metatarsus*; and both these are divided into the three following Species.

First, *Enarthrosis*, where a good round Head enters into a Cavity, whether it be *Cotyla*, or profound Cavity, as that of the *Os Coxæ* receiving the Head of the *Os Femoris*; or *Glene*, which is more shallow, as in the *Scapula*, where it receives the *Humerus*. Of more obscure Motion is that Connection of the *Os tali* with the *Cymbiformis*, which is an *Enarthrosis*.

Secondly, *Arthrodia*, where the Cavity is very superficial, as between the Head and the first *Vertebra* of the Neck in *Diarthrosis*, and between the *Carpus* and *Metacarpus* in *Synarthrosis*.

Thirdly, *Ginglymus*, which is a mutual indenting of two Bones into each other's Cavity, of which the Elbow is an Instance in *Diarthrosis*, the *Vertebra* of the Back in *Synarthrosis*.

Many other things might be said on this Subject, were it pertinent to my present Design, which is only to regard the Union and due Conformity of Joints, in order to the Doctrine of Luxations, in which the Articulations are chiefly concerned: For when those that are united by *Sympysis*, as the Sutures of the Head, and the Bones of the *Maxilla superior*, or dislocated, there is always a Fracture concomitant, and the whole is treated as a Fracture. When the Teeth are dislocated, or to be dislocated, a Tooth-drawer is consulted.

Articulations therefore, whether by *Diarthrosis* or *Synarthrosis*, are the Subject on which my present Discourse concerning Luxations is founded.

When therefore two Bones, which being naturally united make up a Joint, are separated from each other, we call it a *Luxation*.

The Ancients called it a Slipping of the Head of a Bone out of its Cavity. Which is true of the great Joints, but not of all; for the broad End of the Clavicle where it resteth upon the *Scapula*, hath neither Head nor Cavity, yet is capable of Luxation.

Luxations admit of several *Differences*.

1. From the Subject, *viz.* Whether it be a Place of *Differences* obscure Motion, or a manifest one. An Instance of one is, when the Clavicle recedes from the *Scapula*; which the *Arabians* call a Disjunction. Of the other, where an Elbow, Shoulder, &c. is disjointed, which is most properly termed Luxation. There is also a peculiar Luxation proper to Children, *viz.* when the *Epiphysis* of a Bone separateth from the Bone, they being not thoroughly consolidated into one, which however is treated like a Fracture, and consequently deserveth no Place in this Discourse.

2. From the Degree of it, Whether it slip out wholly, or only in Part, *viz.* to the Margin of the Cavity that containeth it. To this latter Sort may be referred those Elongations which are the Effect of an Humour soaking upon a Ligament, as that of the *Coxa*, thereby making it liable to be stretch'd, and to be thrust quite out upon every little Force.

3. From the Situation and Figure of the Part, as, whether upward, downward, forward, backward, on the Right-side, Left-side, &c. of which more in the following Chapters.

4. Differences may also be taken from Accidents attending them, as Inflammations, Wounds, Fractures, &c.

Causes of Luxations are internal or external. The internal are, the Humours which affect the Joints, and, either by relaxing the Ligaments, give way to the Bone to

to depart from its natural Seat, or by a Contraction of the Tendons, put it upwards out of the Cavity. Both these Sorts I have seen in Children, and 'tis likely it was in some of them hereditary, as *Sennertus* hath well observed, *a gibbosus gibbosos, a claudis claudos generari*. The external Causes are, Blows, Falls, violent Extension, in which latter Cases Infants sometimes suffer by the Hands of Midwives, or at more Age, by the Negligence of Nurses.

Signs.

The Signs of Luxation may be taken from the Loss or imperfect Motion of the Joint, and from the different Resemblance it hath with the contrary sound Member, there appearing to the Eyes, or Touch, a Cavity in the Part whence it receded, and a Protuberance where it is lodged. The Member is also rendred longer or shorter, according as the Bone is distorted.

Signs of
Reduction.

The Signs of Reduction are contrary to what have been before delivered. There is also a crashing Noise made by the Bone in its Return to the Cavity : But this is not always certain ; for it may proceed from an Eruption of some Part of the Margin of the Cup or Cavity : In which Case the Luxation is for the most part rendred incapable of Restitution. But this Fracture maketh a different Noise from the other, and may be easily distinguished by the discerning Artist.

Prognostick. In Children and moist Bodies, luxated Bones are easiest reduced, but are with great Difficulty retained. In elderly and dry Bodies the contrary happeneth.

Luxations of long Continuance are difficultly reduced, and are for the most part as hardly retained, the Parts growing emaciated. Those of the *Vertebræ*, occasioned by External Accidents, are for the most part mortal : Whereas some of those, by Congestion, are frequently cured.

Cure.

The Bone luxated, maketh Compression on the neighbouring Parts, whither it slippeth ; and accordingly as those Parts are of more or less Sense, so are the Pains and Accidents that attend it. You ought to hasten the restoring it to its Place as soon as may be. The Work is purely Chirurgical, it having no Dependency upon Nature, but the Extension and forcing back of the Bone into its proper Seat, is done by the Hands of the Artist. There are four Intentions necessary to the

Cure :

Cure : 1. Extension, 2. Reposition, 3. Deligation, 4. Collocation, or placing of the Member in a right Position.

Extension is first required, because of the Situation of the Bone, which being out of its due Socket, rendreth the Motion of the Muscles useless, or rather hurtful, which, the more they pull the Bone, the more they distort it, and contract the Joint. This therefore cannot be committed to Nature, but requireth manual Operation.

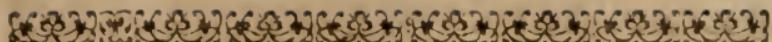
The Extension being well made, you are at the same instant to restore it to the Place it fell from. And to do this, you must consider well the luxated Joint, and which way it slipped out ; for it requireth to be returned in the same Manner : If it lie on the Right Side, it must be prest back to the Left ; and so if it be luxated forwards, it must be forced backwards. The Shoulder requireth one Way, the Elbow another, and the Knee or Ankle another. If the Luxation hath been of any Continuance, or if the Contraction of the Muscles be great, it will be reasonable that you first relax them by emollient Embrocations, *viz. unguent. dialthææ, axung. human. &c.* left by your violent forcing in the Bone, you affect the Nerves, and cause a Paralysis, &c.

Being satisfied in the Reposition of the Bone, you shall then take Care to keep it so ; and that is performed by Deligation : But before you make the Bandage, you ought to apply such Medicaments as have Virtue to resist the Influx of Humours, and strengthen the Part ; and those are Astringents, and such as have been proposed in the foregoing Chapter of Fractures : *viz. bol. Armen. sang. dracon. farin. volatil. balauft. flor. ros. rub. cum albumin. ovi. aceto, aut vino rub.* If there be great Pain, you may embrocate *cum ol. ros. lumbricor. mastichin.* and apply *empl. è bolo dia-palm. de minio, &c.* Then place a Compress wrung out of some of the aforesaid Liquors on that Part whither you suspect the Bone may again tend, and roul it on close accordingly as you see Occasion.

The last Intention is Collocation, or placing of the Member, and that ought, for the Ease of the Patient, to lie soft, and somewhat raised up, neither much extended, nor

nor too much bent, a middle Figure being best to prevent Pain : Yet if it be the Shoulder that is luxated, the Elbow ought to be kept to the Side, and the Hand upon the Breast. If no Accident happen, you must not dress it again till the seventh Day, and then you may alter the Position, and move the Joint a little to and fro, and dress it up with such Medicaments as may give a Breathing to the Humour, and corroborate the weak Joint. In case* it itch, bath it with Salt-water, otherwise with a Decoction *ex summitat. absinth. flor. cham. ros. rub. balaust. bacc. myrtill. juniperi, nuc. cupressi, &c.* to which may be added, *spir. vini.* All greasy Applications relax the Tendons, and prolong the Cure.

Luxations made by Congestion, do require Emollients to resolve and breath forth the crude Humour affecting the Joint, Ligament, and Tendons ; to which Purpose, Rx rad. althææ 3vj. rad. cucumeris asinini 3ij. summitat. majoran. Mij. coctis in brodio ex pedibus vitul. & confusis adde pulv. sem. fœnugræci & lini an. 3j. ol. lilior. axung. human. an part. æq. fiat Cataplasma. You may also use emplast. diachyl. cum gummi, de mucilaginibus, de ranis cum Mercurio, &c. That Matter being thus resolved, you may then proceed in the Reduction of the relax'd Bone ; and after you have reduced it, apply such Medicaments to it as may dry up the superfluous Humidity, and strengthen the Joint ; of which Sort I have given you an Example in the fourth Intention. There will be also required some extraordinary Bandage to retain the Bone in its Place ; but of that I shall have more fitly Occasion to discourse in some of the following Observations, as also of Paralysis, &c. which frequently attend great Luxations.



C H A P. III.

Of Luxation of the Lower Jaws.

THE Processes of the lower Jaws are two on each Side.

1. One more acute, called (by Anatomists) *Corona*, described. which hath no Socket properly so called, but playeth in the Hollow of the Cheek, according to the Motion of the Temporal Muscles, whose Tendon is inserted into it.

2. Another more obtuse, with a roundish Head, called *Condylus*: This hath for its Socket the first *Sinus* of the *Os temporum*, in which it moves, and is kept close to it by the Muscles which lay hold on either Side of the *Coronæ* before mentioned, as the Temporal, or of the outward broad Angle, as the *Masseter*, or the Inside of the broad Part of the Jaw, as the *Pterygoides*. These Muscles, by their perpetual Tendency to a Contraction (which is the Nature of all Muscles) keep the Bone steady in its Situation, but much more so when they are voluntarily contracted for Mastication, Speech, &c.

It is remarkable, that tho' Nature hath made other Muscles to open the Jaws, as well as these to shut them, yet they are in themselves slender, and not inserted into this Part of the Jaw, but quite before at the Chin, so that in their Motion they do not pull down this Part of the Jaw, but the Forepart only; whereas the attollent Muscles, being laid nearer to the *Condylī* on each Side, keep them so close to their Sockets as to make them a Joint, or Centre of Motion; from whence, according to the Custom of Levers and Balances, it falleth out, that those little d'gistrick Muscles, by being applied to the remoter Part of the Jaw, which maketh the Circumference, become equipollent to all the bigger Muscles before mentioned; nay, are sometimes so valid, that upon over-stretching, as in gaping and yawning, they pull

pull the *Condylus* out of its Socket. Sometimes the attollent Muscles themselves do pull it, when we violently gnaw any large Bone, Gristle, or other thing that is hard, and withal so big, as to be necessarily detained in the Forepart of the Mouth.

This Luxation can be made but one Way, *viz.* when it slippeth over the Foreside of the *Sinus*, and passeth into the Cavity of the Cheek under the *Os jugale*, it being defended by Bones, that otherwise are impossible without a Fracture.

Signs of Jaws luxated. When this Luxation happeneth, the lower Jaw is thrust forward, the Teeth are prominent beyond those of the Upper, the Patient can neither swallow nor speak, nor chew, nor indeed shut his Chaps. If you see him presently before any Tumour supervene, you will find the Temporal Muscle rigid. If one Side only be dislocated, the Mouth is distorted, as if the Patient had a *Spasmus*, the Forepart of the Jaw is thrust down on one Side, &c.

Prognostick The Reduction of the Jaws is said to be difficult, and that if they be not timely reduced, ill Accidents do happen, *viz.* *Paralysis*, *Strangulation*, &c. To which I can only say, That I never met with any Difficulty in the replacing them, nor yet saw any such Accidents as by Authors are mentioned; but certainly they are in danger of famishing, for they can neither eat nor drink while the Jaws are luxated.

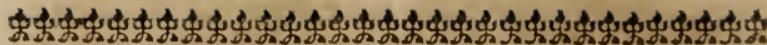
Reduction. In order to the Reposition of the Jaws, the Patient ought to be seated firm, and his Head held steady, lest it start back in the Time of Reduction; then place a Couple of Wedges of Wood close between his great Teeth, as far as you can thrust them, and your Thumbs close by them, and your Fingers externally under both the Jaws, extending them moderately; and at the same Instant, press the farther Parts of his Jaws downwards, and raise up the Forepart. If his Teeth be too sharp for your Thumbs, put a Fold of Linen between. If only one of the Jaws be luxated, move to the contrary Side, and keeping it in that Posture, place your Hand as aforesaid, with your Thumb upon his great Teeth, pressing that Part downwards, and raise the Forepart upwards by a quick moderate Extension, and you shall feel it reduced, and may conclude it so by the equal meeting

meeting of his Teeth, and by the opening and shutting of his Mouth, also by his ready Speech. If after Reduction you suspect his Jaws may prolapse, you may apply a Defensative with Bandage; or, in case of Pain, embrocate the Temporal Muscles and Parts about with *ol. lumbricor. mast. chin. &c.* But hitherto I never saw Occasion to apply any thing.

A Woman aged about Fifty-six Years, was sent to me from a worthy Lady in a neighbouring Country; both her Jaws were luxated, the obtuse Processes of them were slipt forward, and shot under the *Os jugalæ*, and her Chin was thrust forward, and inclining down towards her Collar-bone. She had been so three Days, during which she could neither eat, drink, nor speak. I placed her in a Chair, and Dr. Lenthall, who came with her, held her Head; then I placed my Hands on the Outside, and under her Jaws, and my Thumbs upon her great Teeth, with a Compress of soft Linen under each; and whilst I pressed hard down the farther Parts of the Jaws, I raised up her Chin, and reduced them in a Moment; and to satisfy her that they would not slip down again upon an ordinary Motion of them, I persuaded her to eat and drink, then dismissed her without Application of Plaster or Bandage.

A Gentleman of about forty Years of Age, of a sickly weak Constitution, had his Right Jaw distorted, by which his Mouth being drawn awry, it was supposed a *Spasmus*, and various Applications had been made to that Purpose. One Morning, walking amongst my Patients, I met his Apothecary, who telling me the Case his Patient was in, I replied, his Jaw was certainly luxated; upon which I was the next Day consulted, and saw it so. I laid my Hand on the Outside of that distorted Jaw, and placed my Thumb with a Rag wound about it upon his great Teeth, as far as I could thrust it, and laying my other Hand upon his sound Jaw, I drew the distorted one straight out, and whilst I pressed down the hinder Part, I made Extension, raised up his Chin, and reduced it. He did not at that Instant believe it, but he was soon after confirmed by the Use he had of it. It continued well without any manner of Application to it.

1. *Obser.*
of a Luxa-
tion of both
Jaws.



C H A P. IV.

Of Luxation of the Clavicle, or the Collar-Bone.

*The Clavicle de-
scribed.*

THE Clavicle is a crooked Bone made in the Figure of an *s*, one End of which being thicker, and almost Three-square, is inserted into a Cavity purposely fitted for it in the first Bone of the Sternon, and bound in by a strong ligamentous Membrane. The other End being broad and flat, is joined to the Acromium, where it not only serveth to keep the Shoulder at due Distance from the Sternon, but also assisteth those several Processes which are provided by Nature to preserve the Shoulder-bone from slipping upwards from its Cavity.

This Bone is capable of a double Luxation, one at the Sternon, and that only outwardly, where it riseth from the Breast, and lieth like a Lump. The broad End, near the Acromium, is also subject to a two-fold Luxation, *viz.* upward and forward, being defended from all other Distortions by its neighbouring Bones.

*Cause and
Sign of a
luxated
Clavicle.*

This Luxation is for the most part occasioned by a Fall, and pitching upon the Shoulder. It is discerned by the Prominence it maketh.

Prognosticks

The Clavicle is not so subject to Luxation as other Bones, but being luxated, 'tis most difficultly retained after Restitution, by reason of the Smoothness of its Heads, and the little Hold they have upon the Acromium and Sternon: And if it be not restored, the Use of the Arm is impaired in some of its Motions.

Reduction.

The Reduction of the Clavicle, which End soever of it be luxated, must be made by drawing that Shoulder backwards, and by pressing the luxated End even with the Acromium, or to the Cavity of the Bone of the Sternon, whence it departed. Neither of the Places affordeth

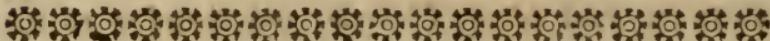
affordeth it much Room, therefore it will require your greater Care; for if you place it not exactly, it will scarce hold right till you make your Applications: Therefore you must have ready Emplasticks, Compresses, and Bandage. Splints are also of Use, whether they be of Pastboard, the Scabbard of a Sword, or Tin. The Bandage ought to be a Rowler with two Heads, to come over the Shoulders, and under the Arm-pit, making so many Circumvolutions as may retain the Dressings close. This being well made, his Arm must be kept up with a Napkin or Towel, and his Hand placed upon his Breast. If all be well, you ought not to loosen the Bandage till you judge it united, which may be guesst at by the Ease and Use of that Arm.

I Was fetched to a young Fellow, who, by a Fall from his Horse, was supposed to have broken his Left Shoulder. Upon View of it, I saw the End of the Clavicle separated from the Acromium, and lying prominent without any manner of Fracture; but the Head of the *Os humeri* was bruised, and remained sugillated long after. I caused one standing behind him to pull back the Scapula, whilst I, with my Hands, forced down the End of the Clavicle, and placed it to the Acromium, then applied an Emplaster of astringent Powders, mix'd *cum album ovar. &c.* over the Clavicle and Shoulder, with a Piece of Pastboard wet *in aceto* and Whites of Eggs, over which I applied a dry one, and upon that a Compress wet with some of the former Liquors, and rowled it on with Bandage as abovesaid, then wet that Part of it over the Clavicle with Whites of Eggs, to strengthen it, and retain it firm. That done, his Shirt and Doublet were put on, and his Arm tied up, as hath been said; then I put him to Bed, and let him blood in the other Arm, and kept his Body soluble by lenient Purgatives. After he had lain four or five Days in Bed, I observing the Bandage right, and the Pain and Accidents diminished, permitted him to rise, and walk up and down in the House. About the eighteenth Day I took off Dressings, and saw the Bone right in its Place, the Parts about being only mark'd with the extravasated Blood. I embrocated them with *ol. lumbric. & spir. vini*, and applied an *emplast. stict. Paracelsi*.

celsi & diapalma, rowling it up as before, and from that Time dressed it no more, but saw him afterwards well Abroad.

*2 Observ.
of a Luxa-
tion of the
Clavicle.*

Another having, by Accident of a Fall in wrestling, started the End of the Clavicle from the Sternon, I made Extension after the same manner as abovesaid, by pulling his Shoulder backwards, and pressing the while with my Hands upon that End of the Collar-Bone, till I had replaced it, then dressed it as aforesaid ; but the next Day finding the Patient in Pain, and the Dressings raised up, I concluded the Bone distorted ; whereupon I caused a Tin-Plate to be made in the Form of the Clavicle, and to reach from the one Shoulder to the other, cut at the Ends, to receive the Fore-parts of the Shoulders, and keep them out : Then I took off Dressings, and restored the Bone again to its Place, and repeating the former Applications, placed the Tin-Plate over the Compress, and rowled it on close. This Plate sat easy, and served to keep out his Shoulders, also retained the Bone in its Place, whereby he was happily cured without more Dressing.



C H A P. V.

Of Luxation of the Shoulder.

*Description
of the Shoul-
der Bone.*

THE Head of the Shoulder-bone being round, is inserted into so shallow a Cavity in the Scapula, that were there no other Guards for it, it would fall out, or be thrust out, almost upon every Occasion : but Nature, that found that Shallowness necessary to the Variety of Motions which is intended for the Joint, found other Ways of securing it from running out : viz. 1. Upwards it is prohibited from an Excursion by the Acromium, the Process *anchriformis*, and the broad End of the Clavicle, which reaching over the latter to the Edge of the former, addeth to the Strength of

of the Place. Nor is this all, for Nature hath made a strong Ligament which reacheth transverse from the Process *ancriiformis* to the Acromium ; and to confirm all, hath laid underneath these, not only a strong circular Ligament, which involveth the whole Head of the Shoulder (being indeed a Collection of the Tendons or Muscles, which lying under and upon the Scapula, particularly serve for the Motion of the Humerus, or else lying upon the Humerus, do take their Origin from the Scapula) ; but also, a Tendon of one of the Heads of the Biceps, which passing thro' a peculiar Notch or Trench of the Humerus, inserteth itself into the Head of the Scapula. Over all these lieth the *Musculus deltoides*, binding all in so strongly, that if the Elbow chance to be pushed, that it forceth the *Os humeri* upon this Fortres, it sooner breaketh into Shivers than maketh a Way thro'. 2. The principal Guard it hath from falling inwards and downwards, is its pendulous Posture, together with the many Muscles that keep it in that Posture, and chiefly the Tendon of the *Biceps externus* (as it is called in our Hall) and of the *Subscapularis*, with the *Rotundus minor* : Yet are not these so strong, but that, between the Tendon of the *Subscapularis* and the *Biceps externus*, it is apt to fly out into the *Axilla*: All other Ways are so barricadoed with Bones or Tendons, that the Luxation is very difficult : Yet I have seen it lie forward somewhat under the Pectoral Muscle ; but whether it was forced thither in their attempting to reduce it out of the *Axilla*, I cannot certainly say, but do suppose it might.

The Causes of this Luxation are, for the most part, *Causes of external*, by some violent Force, either in *Wrestling*, *Running*, or by a Fall from a Horse, or the like. In the Time of War it may happen by the Force of great Shot or Splinters. Some Instances whereof you may see in the Treatise of *Gun-shot* : But it sometimes happeneth from an internal Cause, *viz.* a Catarrh or Fluxion of Humours upon the Muscles or Tendons, which gradually relaxeth them to such a Degree, that the Head of the *Os humeri* slideth down into the *Axilla*.

Its Descent into the *Axilla* appeareth by an unusual Signs. Cavity in the Head of the *Scapula*, where it naturally is

full and round. You may also feel the Head of the *Os humeri* lying in the *Axilla*, hard and round ; the Patient's Elbow hangs from his Side, and cannot be brought so close as the Sound without great Pain, nor can he bring his Hand to his Mouth, nor stretch it upright against a Wall. If the Head of the Shoulder be distorted forward, that Part will appear prominent, with an unwonted Cavity behind, if you compare it strictly with the other Shoulder. The Elbow also hangeth backwards, and will not endure to be brought forwards.

If the Luxation be made by a Relaxation of the Tendons, the Patient's Complaint will inform you, and the Emaciation of the Arm will make the foresaid Symptoms more apparent.

Prognostick. Luxation of the *Os humeri*, from an external Cause, is not very hard to reduce in Children or soft Bodies, if timely undertaken ; but the contrary in elderly People and tough muscular Bodies : And such are frequently slow in Recovery of their former Strength and Motion. Sometimes a *Paralysis* seizeth them, and they emaciate ; but by timely Endeavours they do recover. If in the Reduction, or otherways, any Part of the *Cupula* chance to be fractured, the Retention of the *Os humeri* is not an easy Task. Luxations made by Fluxion, may be easily reduced, but are most difficulty retained in the *Capsula*.

Reduction by Hands. The Reposition of the luxated Shoulder is performed either by the Hand, Bandage, or Force of Instruments. He that will reduce it by Hand, must put it in a Motion contrary to that it went out by. In its going out, it is first thrust or pulled forwards, till it come beyond the Edges of the *Cupula*, then it falleth down below the *Cupula*, and is by the Muscles pulled backward. He that will reduce the Bone this first Way, must reverse these Motions ; viz. first bring it forward, then upward, then thrust it in. By the observing this Method, I have reduced the Shoulders of Infants and little Children so soon, that the Standers-by have heard them knap in before they knew they were out. But the Way of reducing the Shoulder in those of more Growth must be, if done by one Man alone, by placing the Patient in a low Seat, and clapping his Fingers under his Arm-Pit,

Pit, his Knee or Thighs to the Outside of his Elbow, and his Head to the Point of his Shoulder. By his Fingers strongly bent together, he pulleth the Bone both forward and upward. By his Thigh or Knee pressing his Elbow to his Side, he doth likewise help to raise it and bring it forward. The Pressure of his Head keepeth down the *Scapula*, that it may not rise with the Bone. But because this Application of the Knee, Head, &c. is not easily practicable, but upon little and slender Men, we generally commit the prelling of the Elbow towards the Ribs to another Man.

After this Manner the Elbow is brought quite back to the Spine; which being done, his other Hand must be placed under the *Axilla*, to raise the Head of the *Humerus* forward and upward, whilst the Chirurgeon, with his Hands, presseth down the *Scapula* to receive the Bone.

When the Head of the *Os humeri* lieth distorted forwards, under Part of the Pectoral Muscle, the Patient's Elbow must be drawn backward, and held close to the Spine, whilst the Chirurgeon presteth with both his Hands forcibly upon the Head of the Bone.

There is yet another Way of restoring the luxated Shoulder by the Hand, thus: You are to make Choice of a proper lusty Fellow, on whose Shoulder you must hang the Patient by the luxated Arm, bringing his Hand over to the Fellow's Breast. If the Weight of the Patient be not sufficient to make the Extension, some other Body may hang upon him, or pull him by the Legs downward.

But because these Ways of Reduction by the Hand *Reduction* are not always feasible, especially in strong muscular *by Bandage* People, we therefore make use of Bandage and several Sorts of Engines. The most common Way of Bandage is by that of the Girt, which Girt hath a Bolster in the Middle, and the Ends are tack'd firmly together. In the Use of it the Patient must be placed so, that Part of the Girt, with the Bolster, is to be placed under the Arm-Pit, and the other Part over the Chirurgeon's Neck, that he may thereby, with all his Force, raise up the Head of the *Humerus*; which that he may the better do, his Assistant must sit behind the Patient, and pull his Arm backward with all his Might; and if the Chirur-

geon presleth with his Hands upon the Head of the *Scapula* at the same time he raiseth up the *Humerus*, he shall reduce it more easily.

There is another Way of Reduction by Bandage, and that is, by laying the Patient flat on his Back on the Ground, the Chirurgeon sitting behind him, and making Extension by the foresaid Girt, or other Bandage, placed under the *Axilla*, whilst his Assistant lieth along at the Patient's Side, and presseth with his Heel upon the foresaid Bandage, and at the same Instant taketh the Patient by the Hand, and pulleth his Arm with all Force. Thus, by their several Extensions, the Head of the Shoulder-bone may be raised and reduced.

Reduction by Instruments. Instruments proper for the Reduction of the luxated Shoulder are, Ladder, Coulstaff, Pulleys, Glossocomium, &c.

The Way of Extension by a Ladder is, that the Patient climb up three or four Steps of it, and put his lame Arm over one of the Staves, placing it between his Side and the Head of the *Humerus*, and that a strong Fellow take hold of that Arm, and pull it forcibly down backward, whilst the Patient hangeth by it.

The Way by a Coulstaff is safer: The Staff must have a Bunch in the Middle somewhat Wedge-like, and covered with a soft Bolster, fit to place under the Patient's Arm-pit. In order to the Extension, the Patient must be seated near some Post or Pillar, in which the Pully must be fastened to extend his Arm, and the Bandage must be made a little above the Elbow; which being fastened, and the Coulstaff placed, and supported by a Couple of Fellows, the Chirurgeon must stand on the contrary Side, with his Hands on each Side of the *Scapula*, to press it downward, and keep the Patient firm in his Seat, and govern the Operation, taking Care that the Wedge be placed right whilst the Extension is making, lest they break the Bone, or otherwise mischief him.

The Glossocomium, commonly called the Commander, is of Use in the most strong tough Bodies, and where the Luxation hath been of long Continuance, and will not yield to the other Ways of Extension. There ought

to be great Care in the Use of it, for many shrewd Accidents have happened thereby.

The *Humerus* luxated by Relaxation of the Ligaments and Tendons, is restored to its Place after some of the Ways abovesaid, but doth require our Industry to retain it after it is reduced: More of which by and by.

A Lady going one Evening out of her Coach into her ^{i. Observ.} Houſe, trod upon her Gown, and fell down. I ^{of a luxat-} being fetch'd, found her sitting in the same Room, ^{ted Arm.} grievously complaining of her Right Shoulder. Looking upon it, and feeling the Head of the *Humerus* lying in her Arm-pit, I endeavoured to reduce it by Circum-rotation; but it not yielding thereto, I caused one of her Servants to pull her Elbow back towards the Spine, then to thrust it forward. During which I stood on the contrary Side, with one of my Hands upon the Head of the *Scapula*, and the other under the *Os humeri*; and at the same Instant my Assistant thrust it forward, I forced it into its Place; the People standing by heard it knap in, and the Patient declared it by the Ease she felt: Then I applied an *empl. e bolo* round the weak Joint, with a proportionable Compress wrung out of *Oxycrate*, and rowled it on. After which her Servants led her to her Chamber, to Bed. The next Morning I visited her: She had rested well, and was so easy, that her Physician, Sir *W. Gideon*, would scarce believe that the Bone had been luxated. The Lady prepared to remove to her Country-house, and undertook the Cure herself, by some Plasters of her own: But during the Application of them, her Arm grew weaker, and emaci- ciated very much, and was painful about the Insertion of the Muscle *Deltoides*, and so to her Hand, with a Numbness in some of her Fingers; whereupon she returned back, and consulted Physicians. One where- of, supposing the Bone still dislocated, advised the consulting a Bone-setter. I being present, he acknowledged the Bone well set. What he would have said, had I been absent, may easily be guesled by his former Deal- ing with others of my Profession. From that time Antiparalyticks were prescribed, a Fontanel was made in that Arm, near the Muscle *Deltoides*; also Embrocations

and Plasters were externally applied, whereby she recovered the Use of her Arm.

2. Observ. A Nobleman, who was a Commander of Horse in that Army which came out of *Scotland* into *England*, was by some Accident thrown off his Horse, and would not be raised off the Ground till I came. He complained of his Right-Shoulder. I looking upon it, felt the Head of the *Humerus* lie distorted in his Arm-pit : I endeavoured to reduce it by my Hands, as above in the former Observation ; but it not yielding thereto, I caused Mr. *James Davies*, who was Chirurgeon to those Guards, to pull off his Boot from his Right-Leg, and to lie along upon the Ground by his Lordship, to make Extension that Way. Whilst he was making ready, I clapp'd a Compress under the Patient's Arm-pit, with a Towel over it, and placed my self at his Lordship's Shoulder, and made Extension by the Towel, whilst my Assistant took the Patient by the Hand, and thrust his Heel into his Arm-pit with all his Might. We having thus reduced the Bone into its Place, I applied an *emplastrum e bolo* over the Shoulder, and a Compress of Tow pressed out of *Acetum* under the Arm-pit, and rowled them on. That done, his Servants made him ready, and helped him upon his Horse. I made him a Visit that Night at his Quarters, designing to let him Blood in the contrary Arm : But his Shoulder being easy, and not hurt in any other Part, I took my Leave of him, telling him his Shoulder ought not to be dressed till after six or seven Days : But this Person forgetting what I had said, thought himself neglected, and complained to his Superior Officers of me. Whereas in truth, if the Bone be well set and bound up, it is not material whether it be any more dressed or no. Thus in an Army we are frequently rewarded, if we do not attend them as their menial Servants.

3. Observ. One Morning Mr. *Faucet*, Chirurgeon to his Royal Highness, sent to my House, when I lived in the *Old-Bailey*, to come to him into *Blackfryers*, to help him to reduce a luxated Shoulder of a Man lodged there. The Head of the *Humerus* was fallen down into his Arm-pit. The Way of Reduction proposed by Mr. *Faucet*, was, by a Girt. We placed the Man on the Ground, and that Part with the Bolster under the Man's Arm-pit, and put

put the Girt about Mr. *Faucet's* Neck, who stood over him with his Hands upon the *Scapula*; and whilst I drew the Patient's Elbow backward close to his Spine, and thrust the Head of the *Humerus* upward, Mr. *Faucet* raised up the Head of the Bone with all his Force, and it knapt in. The Bone being thus reduced, Mr. *Faucet* slipp'd the Girt off his Neck, and dressed up the Man's Shoulder with Astringents and Bandage, as hath been said.

In the Year 1657, whilst I was riding to a Noble Family in the North, I was desired upon the Road to make a Visit to a Man who had some Days before put his Shoulder out of Joint. I did so, and saw his Arm miserably stripp'd of its *Cuticula* by the Bandage which the several Bone-setters had endeavoured to make the Extension by; yet the Bone lay lodged in his Arm-pit. I applied over the Arm *Cerat Galeni*, and gave Direction to have a Coulstaff made ready against next Morning, with a Wedge-like Prominence in the Middle of it, covered with soft Cloths, and that the Bone-setters should meet me at the Patient's House. The next Morning we met, and having all things ready, I caused the Patient to be seated with his luxated Arm near a strong Pillar, which supported Part of a Mantle-tree, then took off the Dressings, and fomented and embrocated his Shoulder with Emollients, then folded a Cloth about his Arm, a little above his Elbow, and fastened a Bed-Cord over that, and tied the Ends of it about the Pillar, and with a Bed-staff twisted it, shewing one of the Company how to twist it, and make Extension of the Arm by it: Then I placed the Coulstaff, with its Wedge, close under the prolapsed Head of the *Humerus*, two strong Men the while supporting the Ends of the Staff, proportionably high, I standing on the contrary Side, with my Hands on the *Scapula*, to draw it back, and press it downward to receive the Head of the *Humerus*, and to govern the Operation, the Bone-setters looking on. All things being thus ready, the one twisted the Cord, and thereby extended the Arm, the other held the Coulstaff firm and close to his Side. During the Extension our Patient roared, and one Bone-setter called to me to forbear the Extension, saying, *Why will you strive against the Lord?* and turned from us, declaring

4. *Observ.*
of Reduc-
tion by
Coulstaff.

claring that I would kill the Man : But the Head of the *Humerus* was then moving ; upon which Consideration I bid the Man twist on, and at that Instant the Bone knapt in, and we loosened the Bandage, then dressed it up with *empl. e bolo*, with Bandage, and put him to Bed. There being little more required, I went on my Journey.

*5. Observ.
of Reduc-
tion by a
Pulley and
Coulstaff.*

In the Year of the great Sicknes, whilst I was in the North-Country, a Gentleman sent his Servant to me, who had some Half a Year before luxated his Right-Shoulder. He had been with a Bone-setter, who took some Pains in stretching it, and made him believe he had set it ; but upon Sight of it, I concluded it luxated, and felt the Head of the *Humerus* lying in his Arm-pit. I being then lame of my fractured Leg, and indisposed with coughing Blood, advised the Man to return to his Bone-setter, and tell him what I had said. He did so, and travelled from one Bone-setter to another. Every one of them attempted the Reduction, and pretended they had set it. But the Patient returning still to me with it unset, I sent for a Pully, and causing it to be fixed to a strong Post, and a Coulstaff to be held under his Arm-pit by two strong People, we made Extension of the Arm, and reduced the Shoulder, as in the former Observation hath been shewed, without much Difficulty. Then I dressed it up with a restrictive Emplaster and Bandage as above said, and he recovered the Use of his Arm.

*6. Observ.
of Reduc-
tion by Glos-
socomium.*

The deceased Mr. *Edw. Molins* and myself, were sent for to a Fencer who had put his Shoulder out of Joint : We endeavoured to reduce it by the Help of the Girt and our Hands ; but he being of a strong muscular Body, we could not move it ; we therefore embrocated the Shoulder *cum oleo ex ped. bovinis*, and dressed it up with *cerat. dialthææ*. The next Day we came prepared with a Glosocomium, well known to the young Chirurgeons by the Name of a Commander, and reduced the luxated Bone, then dressed up his Shoulder as abovesaid. This forementioned Instrument is frequently used in reducing these Bones in strong tough Bodies, and where the Luxation hath been of long Continuance ; but the Use thereof requireth great Caution, for sometimes sad Accidents have happened thereby.

Luxa-

Luxations from internal Causes are, for the most part, irremediable ; yet I shall give you a Couple of Instances of my Attempts therein.

A young Woman having been long diseased with a Pain in her Right Shoulder, with an Emaciation of that Arm, came to me, recommended by Dr. Chamberlain, sen. her Shoulder seemed to be luxated ; but her Chirurgeon not being of that Opinion, I declined the meddling with her ; yet being afterwards solicited by some of her Friends, I sent her to a Chirurgeon's House, who was one of the Masters of Anatomy, whither I followed, and met several Masters of that Faculty there, at a private Dissection. They together viewed and felt her Shoulder, and unanimously concluding it luxated, prepared for the Reduction of it ; and having reduced it by Pulley and Coulstaff, dressed it up accordingly : But the Ligaments and Tendons were so relaxed, that afterward, upon slacking the Bandage, it relapsed.

A Child of about four Years of Age, having had his Left Shoulder luxated from his Infancy, the Arm emaciated and grown useless. I being at last consulted, did presently reduce it, by lifting up the Head of the Humerus with my Fingers ; but the Tendons being extremely relaxed, the Bone slipt down again as soon as I removed my Fingers : Wherefore I sent for Mr. Smith a Truss-maker, and appointed him to fit the Child with a Pair of Bodice stiffened on the lame Side, wherein was fix'd a Bar of Steel, with a Head like a Soldier's Rest, which, by a Screw, was raised proportionably to support the Head of the Humerus. This being made, I placed a Fontanel in that Arm, and rowled up the other Arm from the Hand to the Shoulder, and braced it to his Breast, designing thereby to force Nourishment into the lame Arm, and necessitate him to use it : But the Child growing froward, they set it again at Liberty. Upon Notice thereof, I deferred farther proceeding in the Cure, till the Child should be more governable, advising the Parents to repeat the Use of the former Prescriptions of their Physicians, as they should see Occasion.



C H A P. VI.

Of Luxation of the Elbow-Joint.

Description
of the El-
bow-Joint.

THE Joint of the Elbow is made by the Concourse of three several Bones: 1. The *Os humeri*, 2. The *Ulna*, 3. The *Radius*. The *Os humeri* ends broad towards the Cubit with a double Head, the inward fitted for the Reception of the *Ulna*, the outward for the *Radius*. The inward Head is exactly shaped, and covered with a Gristle, which rendereth it smooth, and fit for the Motions of the *Ulna*, which, with a suitable Cavity plays about it, inserting upon every Extension of the Arm, its utmost Proces (called the *Olecranon* or *Ancon*) in the larger Cavity that is situate on the Backside of the *Humerus*. In every Flexure its lesser Protuberance plays into a lesser Cavity in the exterior Part of the said *Humerus*. The *Radius*, mean while, being round and flat, with a very small Excavation, doth play upon the outer Head. These Heads have yet a farther Use, *viz.* by their respective Processes, to make a Station for several Muscles, the outer Protuberance giving Original to all the Extensors of the Hand and Fingers, the Innermost to all the Flexors of the same. The Joint itself, besides the Ginglymoide Connection of the *Ulna* to the *Humerus*, is tied fast by a strong Ligament, and well bound in with Muscles, *viz.* on the Inside it is lined with a strong and thick, but very soft, End of the *Brachieus internus*, whose Ligament, tho' hard and thick enough, yet hath a soft Pillow of Flesh interposed between it and the Joint, that so the Pressure may not hinder the Motion thereof, but rather give way to it; yet is the Pressure strong enough to keep the Place firm, which the Accession of the Tendon of the *Biceps* doth much more corroborate; so do the *Pronator radii teres*, and *Supinator longus*, &c. The Outer-part is well guarded by that great strong Muscle which usually is reckoned

reckoned for two, viz. the *Biceps* and *Brachiaetus extenus*, which uniting together, have a fleshy soft Inside, but with a strong broad Ligament fixed on the Outside to the *Olecranon*. There is also a little Muscle called *Anconeus*, which reaching from the End of the *Humerus* obliquely transverse, doth insert itself into the *Ulna*, corroborating the Joint.

The *Radius* also is bound close to the Side of the *Ulna*, and to the *Humerus*, by two remarkable Ligaments, viz. the circular one that involveth the Joint, and the broad one that uniteth it and the *Ulna* together; it is also bound down by the neighbouring Muscles, especially the two *Supinators* and the *Pronator teres*.

He that considereth the Figure of the *Ulna*, and the Strength whereby it is tied to the *Humerus*, will think the Luxation of it almost impossible; yet even this also is sometimes made by the Force that may be put upon it, and that four several Ways, if we may believe Authors; as, outwardly, inwardly, and to each Side.

If the Luxation be forward, the Arm hangeth straight *Signs*. out, or rather outward, and he cannot bend it, a Prominence appeareth in the Bout or Inside of it, and an unwonted Cavity where the Elbow should be: But if the Luxation be backward, the Cavity will be in the Fore-part, and the Arm curved. If the Luxation be on the Inside, the Cavity will be on the Outside; and so the contrary, if it be externally distorted.

The perfect Luxations of this Joint do rarely happen: *Prognostick*. When they do, they are difficultiy restored; and if there be a Fracture of any of the Processes of the Joint, the Case is deplorable.

If the Cubit be luxated forwards, the Arm must be *Cure*. extended, but not in a straight Line, lest you break the Tip of the *Ulna*, but obliquely. To which End two Persons being employed, one to hold the *Humerus*, the other to pull the Arm below, a third Person must guide the Elbow so as to keep it bent, and to direct the Bone, which is done by pressing a Bolster upon the Bend of the Joint, or by a Girt, or other Bandage, pulled behind, or by one in the Nature of a Stirrup, in which the Chirurgeon may put his Foot, and make Extension that Way.

If the Luxation be backwards, the Extension being made obliquely, as before, the Reposition is easily guided by the Chirurgeon's Hand ; yet since the extending Muscles of the Cubit are very strong, it will be necessary that the Muscles serving the Cubit be first well embrocated with lenient Ointments : But if, notwithstanding, you cannot reduce it by Hand, the Ladder, or other Engines must be used ; and after Reduction, apply Restrictives, &c. for these Luxations are subject to great Fluxion, Inflammation, &c.

1. Observ.
of a luxa-
ted Elbow.

THE former of these Luxations happened to a Servant-Maid in *Whitefryers*, carrying a Pail of Water. Her Feet slipping, she endeavoured to save herself ; but falling backward, she pitched upon her Right-hand, and distorted the Head of the Bone inward a great way. The poor Creature was carried into the next House, being an Alehouse, and Mr. Clark a neighbouring Chirurgeon and my self were fetched. Dres-sings being made ready, and the Wench seated, one of the Company stood on the contrary Side of her, with both his Hands upon that Arm, below the Shoulder, and held her firm. Mr. Clark made an Extension below the Cubit, and myself, with a bolstered Girt upon the prominent Bone in the Bout of the Arm, pulied it backward. After we had thus come to the very Brink of the Joint, Mr. Clark bowing the Arm suddenly forward, I drew it back into the Place, then embrocated it *cum ol. rof. myrtill. & aceto*, and applied *empl. e bolo*, with Bandage, and left her Hand upon her Breast ; but she was lame long after.

If the Cubit slip out Side-way, the Reduction may be made by Extension and Impulse of the Hand.

That of the *Radius* is also reduced by the like Means ; so that Examples need not be given : Only in the other of a curved Wrist, I shall give one Instance :

2 Observ. A Lady being overthrown in her Coach, the lower Process of the *Ulna*, called *Styloides*, was distorted from the *Radius*, and one of the Bones of the *Carpus* shoved in between. I made Extension of the Wrist, and prest that Bone of the *Carpus* to its Fellows, smooth, then thrust the Process of the *Ulna* close to the *Radius*, and applied round the luxated Joint an Emplaster of astringent Powders,

Powders, *cum album ovi*, Splints, and Bandage, as in a fractured Bone, and placed it on her Breast, and thereby restored it to good Use, and its natural Figure.



C H A P. VII.

Of Luxation of the Carpus, Metacarpus, and Fingers.

THE *Carpus* is composed of divers Bones : One lieth out of Order ; Three of them are joined to the Processes of the *Radius* and *Ulna* ; Four to the *Metacarpus* ; and all of them bound in by a strong Ligament, by the Strength of which the Joint is made more firm : Yet these Bones may be all thrust out together, or any one of them single, inwardly, outwardly, also towards either Side.

This Luxation is discovered by the Tumour it maketh *Signs of* in the Place where it lieth distorted, also by the Flexure *the Carpus* : or Extension of the Fingers : *viz.* If the Bones be moved *luxated*. inward, the Flexors of those Fingers are so stretched, that the Extensors cannot stir them ; and so, contrary, If the Bones start outward, the Extensors are immovable : And if they be luxated Side-ways, the Hand leans either to the Thumb or little Finger.

The Way of Reduction is, to lay the Hand, and that *Reduction.* Part of the Arm, flat upon a Table, and make Extension above and below ; during which the Chirurgeon prefeth down the prominent Bones with his Hands into their several Cavities. The Bones reduced, remove the Hand, and place it upon a *Ferula*, and dress it up with Restrictives, Compress, and Bandage.

The Fingers may be luxated backward, forward, or on either Side. The single Luxation of the several Bones may be demonstrated by their Protuberance, and by the Complaint of the Patient. They may be easily reduced by Extension, they having no Process to hinder ; and being

*Luxated
Fingers.*

being reduced, the common Restrictive and Bandage will retain them so.



C H A P. VIII.

Of Luxation of the Hip.

Description of the Hip. THE Joint of the Hip is a Connection of the Head of the *Os femoris* to the *Acetabulum* of the *Os ischion*, which is done by two strong Ligaments; one outward, and membranous, encompassing the whole Head of the *Femur*, from the Edges of the *Acetabulum* to the farther End of the Neck, where it toucheth the great Trochanter; the other inward, of a round Figure, like a Cord, tying the *Apex* of the *Caput femoris* to the inner Side of the *Acetabulum*, near the Centre. This Articulation is confirmed and strengthened by great strong Muscles: viz. on the Outside by three *Glutes*, on the Inside by the *Triceps*, together with the *Levidus*, and the four little Rotators. All which being duly considered, it must needs follow, that the Force must be great that doth drive this out of its Place: Yet when the Weight of the Body, and the undue Position of the Thigh do concur, they frequently make that Luxation; so likewise doth sometime external Force.

It is remarkable, that this Place admitteth not of a Semi luxation, as others do; the Head being so round, and the Cavity so glib and deep, that whatever the Force be, if the Head be not thrust quite out, it will slip in again as soon as the Force ceaseth. It doth slip out four several Ways; outwardly, inwardly, forward, and backward: Yet these two latter I never saw; but by Congestion, the Ligaments and Tendons may be so relaxed, that it may fall out either Way.

If the Luxation be inward, the Head of the *Femur* *Signs of* may be felt round and hard a little beneath the Groin. *a luxated* But if the Patient be in Bed, you may judge of it by *Hip.* turning up the Cloths at the Beds Feet, the Leg will appear longer than the other, and the Knee and Foot lie turned outward. If the Luxation be outward, that Leg will be much shorter than the sound one, and the Toes turned inward.

In a Relaxation of the Hip, the Leg hangs for the most part directly down and loose, is weak, turneth either Way, and is much emaciated.

Luxations of the Hip are difficultly reduced, and being so, are extreme apt to prolapse, by reason of the over-great Extension or Rupture of the internal Ligament, which should hold the Bone in its *Acetabulum*. And if it be not reduced, it will be subject to great Pain and Fluxion from the over-stretching of the Muscles, and Pressure upon them with its great Head : Yet after some Months those Muscles become callous, and having yielded to the Extension, the Patient makes a Shift to go upon it, tho' lamely ; but the Member suffereth an *Atrophia*, and is shorter than the other.

When the Luxation happeneth by Congestion, it is subject to Apostemations, and the Head of the Bone corrupts by lying slabb'd in the Humour, and the Patient languishes and dies emaciated.

If the Thigh-Bone be luxated inward, and the Patient young, and of a tender Constitution, it may be reduced *Reduction of the Os femoris.* by the Hand of the Chirurgeon, *viz.* he must lay one *femoris.* Hand upon the Thigh, and the other upon the Patient's Leg ; and having somewhat extended it towards the sound Leg, he must suddenly force the Knee up towards the Belly, and press back the Head of the *Femur* into its *Acetabulum*, and it will knap in : For there is no need of so great Extension in this kind of Luxation ; for the most considerable Muscles being upon the Stretch, the bowing of the Knee, as aforesaid, reduceth it : Yet in tough Bodies it may require stronger Extension ; and in that Case the Patient must be laid upon a Table, flat on his Back, and a Pin of a good Thickness ought to be fix'd in the Middle of the Table, to stand up between his Legs, close to that *Inguen*, that the Extension may be made thereby. During which, the Extension must be

made by two Men, the one pulling him by that Arm-pit, the other by the Leg; which latter Extension must be made obliquely towards the sound Leg.

If the Luxation be backward, he must be then laid upon his Belly, and the Pin placed, as aforesaid, in his Twist: It ought to be as thick as a Rowling-pin, and covered with Cotton, that its Hardness may not be offensive. The Extension may also be made upward, by a Towel or Girt between his Thighs; and the while that Leg must be stretch'd by Pullies, or such like Strength, and the Bandage fastened above the Knee.

The Bone once reduced, dress it up with Restrictives, and good Compress and Bandage, then bind it to the other Leg, and keep him in Bed; for these Bones are apt to start, especially if the *Ligamentum teres* be broken. If after Reduction, and such Regulation, the Bone do start again, I should forbear any farther forcing it, to avoid the Danger of Apostemation, &c. for, as I have said, they may recover Strength to go on it, tho' it be never reduced.

A Luxation made by Relaxation or Resolution, requireth good drying and corroborating Fomentations, Emplasters, Epispasticks, Fontanelles, &c. The Habit of Body ought also to be treated by Internals, as in the King's-Evil, and if it apostemate, to be dressed as such Abscesses.



C H A P. IX.

Of Luxation of the Knee.

*Description
of the Knee
Joints.*

THE Joint of the Knee is made by the Connection of the lower Head of the *Femur*, and the upper Head of the *Tibia* and the *Patella*. The first of these, by a double Protuberance, is inserted into the double Cavity of the latter, and suffers Constriction on the anterior Part, from the great and large Muscles, which running to and beyond the *Patella*, join that to the *Os tibie*, and

and bind it down upon the Articulation, so as of the whole to make a Joint. On the hinder Side it is guarded with the two *Hamstrings*, so called, *viz.* the Tendon of the *Biceps* outwardly, and of the *sartorius*, *gracilis*, *semimembranosus*, & *seminervosus*, inwardly; between which, thro' a little Cavity made for that Purpose, all the great Vessels have their Passage to the Legs. Now the Joint being thus strengthened, doth scarce admit of any Luxation forward, unless the Cause be exceeding violent. Backward, on each Side, it is subject to both Luxation and Semiluxation.

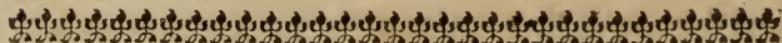
The Signs of the several Luxations of the Knee are *Signs of a* apparent to the Eye, by the Protuberance in the one *Luxated* Part, and Cavity on the contrary. *Knee.*

They are not difficult to reduce, nor subject to such Accidents as those of the Elbow. *Reduction;*

Those Luxations which happen on either Side of the Knee, may be reduced by a moderate Extension with your Hands. The Luxation backward is restored by extending it a little, then bend the Leg suddenly backward, bringing his Heel to his Buttock, and you shall hear it knap into its Place. It being so, stretch it out again, and embrocate the Joints and Parts affected, and apply Astringents, with a Compress in the Ham, with good Bandage. I shall shew you the Manner of reducing the perfect Luxation more particularly, as followeth.

A Gentleman of about thirty Years of Age, riding upon *Observat.* the Road some few Miles out of Town, was, by *of a luxa-* the rushing of a Cart, tumbled with his Horse into a *ted Knee.* Ditch, and brought back to *London* extremely lame and bruised. I being fetched to him, found him in Bed. The Head of the *Os tibiae* was shot under the Thigh-bone, and lay stretched out straight, exceedingly swelled, and much Blood extravasated amongst the Muscles of the Calf of his Leg. I caused the Patient to be laid on the contrary Side; then one of the Company held him down, and kept that Thigh steady, whilst I took him by the Foot and Calf of his Leg; and after I had a little drawn it to me, I forced it backward towards his Buttock, by which very Motion it knapt in to its Place. That done, I extended it again, placing, the while, my Hand in the Hollow of his Knee. The

Motion of that Joint to and fro, and the filling up that Cavity under the *Rotula*, were certain Signs of its Reduction. I embrocated the Leg *cum albumine ov. ol. ros. myrtill. & aceto*, and applied *empl. e bolo* over all, with a Compress in his Ham, then rowled it up, and laid his Leg upon a Pillow, to the Ease of the Patient. That done, I let him Blood in his Arm, prescribed him an Emulsion of the cold Seeds, &c. and kept his Body soluble by Clysters, and advised him a slender Diet. The third Day I repeated Embrocations with the fore-said Oils, *cum aceto*, and thereby repelled the Humour so, that there only remained some Remarks of the extravasated Blood: I then embrocated those Parts *cum ol. charn. lumbric. spir. vini*, and applied *empl. stict. Paracels. & diapalmæ* on the weak Joint. From the first Application he grew daily easier, and by these latter the Joint waxed strong, and he rose and walked with a Crutch in his Chamber; and some time afterwards I saw him walking Abroad, with a Stick in his Hand.



C H A P. X.

Of Luxation of the Ankle-Bones.

*Description
of the Ankle
Bones.*

THE lower End of the *Tibia* being joined to the *Fibula*, maketh a ginglymoide Cavity in which the *Os Tali* is inserted; the two Angles being on the Inside the Product of *Os Tibiæ*, make the Outer on the *Fibula*. Underneath lie all the *Offa Tarsi* in Order; viz. the *Os Calcis* under the *Talus*, the *Os Cymbiforme* before it: Outward of that, joining to the *Os Calcis*, is the *Os Cubiforme*; and between the *Os Cymbiforme* and the *Metatarsus*, lie the three *Offa Cuneiformia*.

This Joint is involved in strong Membranes and Ligaments, and bound in by divers strong Tendons; viz. behind by the Tendon of the *Gastrocnemius*, and yet close underneath in the Hollow of the *Calcaneum*, by the *Flexores pollicis & tertii internodii digitorum lateralis*;

lis; inward by the *Tibialis posticus*; outward by the *Preconezi*; forward by the *Tibialis anticus*. These joined to the strong Ligaments that every where bind up the Part, and assisted by the Figure of the Bones, do make a Joint that would not easily be dislocated, did not so great a Weight lie thereupon: But from great Weight and Force it suffereth four Ways.

If the luxated Bone be distorted inward, the Soal of *Signs of a luxated Ankle.* the Foot lieth turned outward; so likewise, if the Luxation be forward, the broad Tendon of the Heel lieth hard, and stretch'd out, and the Foot appeareth shorter, because the Joint is moved forward, and possesseth most Part of the Foot: But if the luxated Bone be distorted backward, it lieth over the Heel-bone, in which Case the Soal of the Foot seemeth bigger and longer. Accordingly as these Signs are evident, the Luxation is perfect or imperfect.

The Reduction is not difficult, yet these Luxations *Prognostick.* are subject to great Pain, and are accompanied with Tumour and *Eccymosis*, and the Patients are long lame of them.

The Way of Reduction in tender Constitutions, may *Reduction,* be by Extension with your Hands, the one taking hold of the Leg, the other of the Foot. During which Extension, the Chirurgeon must press the Bone the contrary Way to which it was fallen. In case the Extension by your Hands suffice not, you may make use of Pullies, or other Engine. The Bone being reduced, apply Restrictives, with Bandage, as above-said.

Sometimes the Ankle Bone is apt to turn out on either Side, by reason of Relaxation of the Tendons: In which Case, tho' you do reduce it, yet upon the least walking on it, the Bone slips out again. Some Years ago, such a one was brought to me; I reduced it easily, and it as soon slipt out again: Whereupon I caused a Shoe to be made, by which the Ankle was kept steady, and at length, by Application of Astringents, &c. it recovered Strength.

The Bones of the *Metatarsus*, and Toes, are frequently fractured, but rarely luxated, by reason of their strong Ligation by so many Tendons: But if it so happen, their Cure is the same with that of the Fingers and Hand.



C H A P. XI.

Of Luxations of the Spine.

LUXATIONS of the Spine, which are most usually from inward Causes, as in Rickety Children, also in the King's Evil, and other Tumours, happening upon those Bones, require internal Remedies, so are referable to a Physician. The Chirurgical Part consisteth in the Application of Plaisters, as hath been shewed in the Treatise of the King's Evil, also in good Bandage, which chiefly belongs to the Bodice-maker.

When it happeneth from Force, a speedy Re-position is required, about which *Galen*, *Hippocrates*, *Oribasius*, *Celsus*, &c. speak much, who all may be consulted: The Case is so rare, that I think it not needful to add any Discourse here, much less that of *Hildanus*, about reducing the Spine when luxated inwardly. He that pleaseth may look into the Author.



A TREA-



A

TREATISE OF LUES VENEREA.

The EIGHTH BOOK.

C H A P. I.

Of Lues Venerea.



Lues Venerea is a venomous contagious Disease, gotten either immediately, or mediately, from an impure Coition.

I say, Immediately, or Meditately, because it is very manifest, that not only the Persons so copulating are infected, Ways of Infection.

but also the Children derived from such Parents, and Nurses that suckle those Children, and any other Child that sucks upon those Nurses; and so forwards. It is frequent to mention other secondary Ways of the Propagation of it; as, lying in the same Bed with an infected Person, lying in the same Sheets after them, or wearing their Cloaths. Nay, it is affirmed by some, that Men have been infected by the same Cloaths they themselves wore when they were diseased. Drinking with one so diseased, or sitting in the Close-stool after

them, as likewise numbered amongst the Causes of Infection.

These are all such convenient Excuses for the more shy and coy Patients, who will not otherwise be brought to confess their Distempers, - that it is Pity to discountenance them. Nor will I deny the Differences of Constitutions to be so great, and some of them so liable to this Disease, by some other previous Indisposition of Body, that they may be infected with the Tenth-part of what another would escape sound from. And this especially I do acknowledge in Women, the Softness and Tenderness of whose Sex being frequently attended with thin and sharp Serum in the Blood, renders them liable to very quick Impressions ; yet in Men, and indeed in the Generality of Patients, we find the Disease not so active as to convey itself from one Subject to another, without actual Coition, or something very equivalent to it. And as to wearing of the same Cloaths, it is notorious that many Hundreds, cured by us Chirurgeons here in the Town, do commit that Error (if it be one) without the least Inconvenience. Nay in sound and firm Constitutions, impure Coition itself is not always sufficient to infect : Of which I have seen the frequent Experiment during the three Years I served in the King of Spain's Navy, where our Mariners, as soon as their Pockets were full of Money, would be getting ashore to the Negro's, and other common Women, that usually attended their Landing, and served their Pleasures in the neighbouring Broom, which grew very plentifully on some of those Shores. I have known, and dare say, more than twenty Men lay with one and the same Woman the same Day, and only some of them infected, the rest going free, tho' they all equally deserved it.

But Nurses may either infect Children, or be infected by them. Children that have had no Ulcers in their Mouths or Lips, or any other visible Symptom of the *Lues*, have notwithstanding betrayed their own Infection, by transmitting it to the Nipple of the Nurse. In which Case it is frequent to see serpiginous Ulcers arise one after another, growing at length into so many round crusty Ulcers ; also Nodes thrusting out of the Back of the Hands, Shins, &c.

Insec-

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Infections of Children are more obscure; for though many of them, after they be born, have such Scabs and Ulcers as do sufficiently manifest the Disease, yet it is not always so; for generally they do often come into the World very clear, and with the Appearance of very sound Bodies, which, notwithstanding, have been certainly infected, and have died of it, or at least have been very infirm; and tho' they were brought to their Ends by some other apparent Disease, yet the Pox hath been judged the Foundation of all.

I shall give you a Three-handed Instance that may confirm several Parts of this Discourse.

A lusty young Fellow brought me to see his Wife, which I did in the Company of Dr. Mapletoft: We found upon her Face a great Cluster of round crusty Venereal Ulcers; yet, not only her Husband was seemingly sound, but her Child also, who being Half-a-year old, appeared lusty and strong, played merrily in the Nurse's Arms, but that Day died suddenly; nor could I impute that Accident to any other Cause but the forementioned Infection.

Yet I would not have any Man rash in judging all Ulcers to be Venereal that do resemble them; for I have seen Nurses with chapt Nipples, and serpiginous Ulcers on the Breasts, and Maids likewise in the same Condition, who have been cured without any Respect to the *Lues*.

I have seen also many Infants broken out about the Lips, Face, Head, and Body, with many suspicious *Pustulae* and Ulcers, that were born of chaste Parents. In our publick Healings we present many such; if there be any diseased Glandules found about the *Musculus mastoideus*, I supposing them rather to be strumous.

Having thus far treated of the Original of the *Lues*, *Its Nature.* it will be now seasonable to describe the Disease itself: For the doing of which it will not be necessary to run thro' all the nice Diversity of Opinions which *Sennertus* and other Authors have reckoned up; such an Attempt would better become a Chair in the University, than a Practical Treatise: I do only in short say, That it is a Disease produced, not by Excess of any of the four Qualities, but by the actual Communication of a down-right Venom, which usually affects that Part of the Body which

which it first toucheth, and afterwards the Blood itself, by the Virtue of which all the solid Parts are, by Degrees tainted.

*Its Degrees
and Symp-
toms.*

The Species, or rather Degrees, of this Disease, have, by *Palmarius*, been reckoned Four, according to the Degrees of Infection. In the first he supposeth only the Hair to fall off, without any other Hurt of the Body; a Case, I doubt, very rare. In the second, the Skin groweth rough and spotted, with many little Protuberances. In the third, downright Scabs appear in the Head, Face, &c. In the fourth, the solid Parts are infected, as the Bones, &c. But these Degrees are either ill ordered, or at least not justed to the Appearance of the Diseases that occur in this Age; therefore I shall endeavour to rank the Degrees or Symptoms of it according to the Events which we usually observe in our Practice.

Therefore, when a Man hath had to do with an impure Woman, either he hath some Heat or Inflammation on the *Penis* with Excoriation, which ariseth soon after Coition, and is caused by the Affliction of a virulent Humour, or else he finds a Heat in his Urine, and in a Day, two, or three, a *Gonorrhœa*, or issuing of virulent Matter out of the seminal Vessels, thro' the *Urethra*. This Inflammation is very apt to produce Excoriation and Ulceration, upon which chancrous Ulcers arise; and sometimes when the Infection hath been vehement, or the Inflammation neglected, it tends to a Gangrene, and Crystalline Bladders arise, and the Part mortifieth.

Sometimes a *Gonorrhœa* succeeds not; only the Infection taking rather along the *Cutis* to the Groin, doth make Impression on the neighbouring Glandules, and produce a *Bubo*, which, according to the Degree of its Malignancy, either proves easily curable, or else improves in its Venom, and terminates in a Phagedænous Ulcer, with jagged Lips. At this time of the Disease, I have seen many round hard Venereal Ulcers upon the *Serotum* and *Perinæum*. Sometimes, where none of the other Symptoms have preceded, a small Chancrous Ulcer ariseth between the Prepuce and the Glans, above or below, on one Side, or in the Entrance of the *Urethra*; one while eating thro' it, another while destroying the *Frenum*, &c. These Ulcers are sometimes only corrosive,

corrosive, and sometimes callous, or a Callofity without an Ulcer.

The Attendance of a Chancre is commonly a Breaking out all over the Body like a Flea-biting, which terminates in various Sorts of Tetteres or Ulcerous Scabs; or it may be, that Pustules arise in one or more Places of the Body, as Head, Face, Arms, Thighs, or Legs, or Ulcers in the Tonsil, Palates, &c. and at the same time I have seen a Gumminess upon the *Musculus mastoideus*, drawing the Neck on one Side.

The wandring Pains begin towards Night to affect either the Shoulders, Arms, Legs, or Head, sometimes this last is affected alone to great Excess, and about this time, *Verruce*, *Condylomata*, *Marisca*, or *Ficus*, appear in the *Podex*; also *Ozæna* and Ulcers of the spongient Part of the *Os ethmoides* and Gristles of the Nose; also, about this time, Tumours by Congestion arise in the Breast, Arms, Legs, and become Ulcers of difficult Cure.

The Pains growing more fixed, *Gummata*, or Nodes, usually arise, and continually afflict them, but towards Night grow more intolerable, and at length the Bones corrupt.

Coincident with several of these latter Degrees, are the Noise in the Ears, Deafness, a *Polypus*, *Ophthalmia*, *Fistula Lachrymalis*, fierce Catarrhs, Colicks, *Diarrhœa*, and *Tabes*.

These dreadful Symptoms have frequently possest the Imaginations of some People, who having taken the Way to get the Pox, are soon persuaded that they have it. These Men will strangely imagine all the Pains and other Symptoms they have read of, or have heard other Men talk of. Many of these Hypochondriacks have come to Sir F. P. in which Cases he hath been pleased to send for me to consider of their Complaints with him. They commonly went away from us unsatified, nor could they quiet their Minds till they found some Undertaker that would comply with them; which done, they were never the better, the Imagination, in which the Disease was seated, remaining still uncured; whereupon presuming they were not in Hands skilful enough, they have gone to others, and so forwards, till they had ruined both their Bodies and Purse.

There

There have been three of these People with me lately; one a Tradesman, who told me, that since his Wife's Death he had fallen into ill Company, and being heated with Drink, strayed, and got a Clap, for which he had been under several Hands, that it had cost him Forty Pounds amongst them, but he was still worse and worse. I asked him, if he had ever a *Gonorrhœa*? Yea, said he, with great Pain in my Back, which still continues; also, such a Pain in my Nose, that I fear it will fall. Upon more particular Enquiry, I found no such thing; only, upon straining to make Urine, or upon the Close-stool, he had an involuntary Effusion of Seed, which was an old Infirmitiy he had quite forgot. I endeavoured to satisfy him that he escaped better than he deserved. Whether he continued in the same Opinion he seemed to have received from me of his Condition, I some time doubted, but lately have seen him, and been assured, that since he spake with me he had taken no Physick, nor felt any Cause for it, he continuing very well.

Progrœsticke. Authors, upon the first Entrance of the Pox into Christendom, generally looked upon it as not only incurable, but also so highly infectious, that they ran away from it as much as the Jews did from the Leprosy; but later Ages, and long Experience, have made it less formidable; yet even to this Day it must needs be acknowledged difficult to cure, in consideration of its malign and contagious Quality, and the ungovernable Disposition of the Patients.

If the Habit of Body be strong, the Cure of all these Species of *Lues Venerea* whether they be Chancr, *Pustulae*, *Serpigo*, *Herpes Miliaris exedens*, *Phagedæna*, *Ozæna*, Ulcers in the Palate or Tonsils, they are all much easier cured than the same are in any other Chronick Disease: But to eradicate the *Virus*, that it doth not return with more Malignity, is somewhat more difficult.

If the Patient hath been formerly clapt, it will be the more difficult to cure him the second Time, and worse the Third.

If he hath passed thro' long Courses of Mercurial Remedies ineffectually, his Cure will be difficult; and if he hath been salivated by Unction and relapsed,

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the Cure will be hard, by reason the Mercury is become familiar to him, and his Body is, for the most part, emaciated and squalid.

Gummata and Nodes are more difficult of Cure than the Species above mentioned, and those whose Bones are corrupted are yet more difficult of Cure; but if the Habit of Body be strong, and the *Viscera* sound, all the Species of this Disease are curable, if the Patient keep his Chamber, and submit to the Rules of Physick and Diet, without which Submission we can scarce cure the lesser Species; and accordingly as they have been slubber'd over, the Malignity that remains will, at one time or other, shew itself, either in some Chronick Disease, as, *Asthma, Catarrh, Cholick, Diarrhoea, Stranguria, Rheumatismus, Hydrops, &c.* or in some Species of the *Lues Venerea*, when possibly the Patient will not be so willing to acknowledge the Disease; and what Hope is there then of his Cure?

Also, if the *Viscera* be unsound, or the Patient hectic, a *Marasmus* will attend it, and the Cure is impossible.



C H A P. II.

Of the Remedies generally used in the Cure.

THE Medicines alter according to the Degrees of the Malady, and other Circumstances, in which the following Discourses will inform you. My present Business is, to give a general View of them all, with their Natures and Uses. Now the known Remedies, all or *Its Cure.* some of which we use in this Cure, are, Bleeding, Purging, Vomiting, Salivating, Sweating, Cordials, and Opiates; to which we may add, Dietetical Directions, especially Alterative Drinks, and Topiccs.

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Concerning Phlebotomy, tho' it do not cure the Disease, yet in the very Beginning of it we usually let Blood, to calm the fermenting Humours, and dispose them for Evacuation, and prescribe a Clyster before or after.

Bleeding.

If the Disease be of long Continuance, and they have been let Blood some Months before, yet if we design Salivation, we do again let them Blood, if the Body be not too much emaciated: For in some of those a Fever hath happened in the time of raising the Salivation; and in Bodies of stronger Habits, I have often seen them to break out in Heat all over in the Beginning of the Flux, so that then I have been necessitated to let them Blood when it was not so proper. When this Disease appeareth in the Groin with a Bubo, we do not let Blood; yet some have advised it in the Foot, as a Way to lead the Humours thither.

Purging.

Purging is more universally necessary, few Cases being to be put in this Disease where it is not required: For whosoever is infected, either is already cacochemical, or will quickly be so, if by a sudden Evacuation of the corrupted Matter you do not prevent it. It is also useful in keeping the Blood low, which, the higher it is, the more apt it is to be inflamed. Of Purges some are only lenitive, fit for weak and extenuated Persons, also to dispose the Body for more strong Purges. The Lenitives are, *Manna*, with *Cremor Tartari*, in Whey or Posset-drink, also the Decoctions of *Tamarinds*, *Cassia*, with the Infusions of *Sena*, *Rhubarb*, &c. *Syr. de pomis purg. de cichoreo cum Rhabarbe*. *Elect. lenitivum*, *Diaprun. Diacatholicon*, &c. Rx *Sarsaparillæ* 3ij. *scobis Guaiaci* 3j. *fol. beton.* Mss. *flor. Paralyseos* P. i. *Tragæ com.* 3ij. *fol. sennæ* 3ls. *coquant. lent. igne*; *colat. adde Rhei, agarici trochiscati seorsim in aq. cichorei infus. an.* 3js. *Colaturæ adde Syr. infus. Ros. pallidæ.* 3vj. *Mannæ* 3j. f. *potio.* Rx *fol. senæ mund.* 3ls. *Turbith gummosi, Falap. hermiodactyl.* an. 3j. *Zinziberis, Cinnamomi* an. 3j. *coq. insufficieni quantit. decoct. sarsæ, &c. ad* 3vj. *Colaturæ adde Syr. de spin. cervina* 3js. f. *potio.* Rx *Elect. Diacatholici* 3ls. *diaprun. solut.* 3ij. *diasennæ* 3j. *cum syr. de spin. cervina q. f. exhibeatur in cochleari.* These, besides their Use where stronger cannot be given, are also Preparatives for Bleeding, and thence to stronger Physick,

sick, viz. such as followeth: Rx Fol. Sennæ ʒij. Turbith gummosi, Hermodactyl. an. ʒij. Hellebori nigri, pulp. Colocynth. an. ʒvj. ras. Guaiaci, sassafr. an. ʒj. cort. Guaiaci, baccar. Juniperi recent. cort. exterior. citrian. ʒls. Cinnamomi, Garyophyllat. an. ʒij. infund. in æqual. part. aquar. melissæ, ulmariæ, card. benedict. per horas 48, deinde f. ebullitio levis cum express. fort. In Colatura dissolve Aloes rosat. ʒijs. Diagrid. ʒj. coagulentur ad formam extract. pro usu, Dos. ʒls. ad ʒj. Rx Turbith gummosi, sennæ, Hermodact. an. ʒiij. Diagrid. ʒij. Zinziberis ʒj. Mastiches ʒls. Sacchari opt. ʒiij. Pulveriz. omnia subtil. & per setaceum trajiciatur. Dosis ʒj. in vino alb. vel jusculo: Or, Rx Folior. Sennæ, Rhei an. ʒls. Agarici trochiscati turbith, Hermodact. Crystalli Tartari, an. ʒij. Jalapii, Mecoacæ an. ʒij. f. pulvis subtil. & cum syr. de sp. cervina, & de pomis purg. q.s.f. Electuar. dos. ʒij. The stronger are: Pil. è dusbus, Cochiae min. Extract. Rudii, pulv. Cornickini, &c. These ought to be joined with Calomel, viz. Rx Mer. Dul. gr. 15. aut 20. Extract. Rudii, vel Cochiae min. ʒj. vel ʒls. fol. auri q. s. cum syr. ros. solut. f. pill. Rx Extract. nost. ʒij. gum. Guaici ʒls. Merc. dul. gr. xiv. ascendendo ad ʒj. cum syr. de spina cervina fermentur pill. In gross phlegmatick Bodies, you may purge with pulv. Cornickini & Mer. dul. In case of Pain, we add a Grain more of Laudanum. Mercury thus mix'd with Purgatives, is it from which we must expect our main Success; for tho' the other may purge strongly, they, of themselves, have not Virtue to check the Malignity even in the lesser Species of this Disease.

This I the rather add, because of the Wickedness of many Pretenders, who will in this Cure declaim against the Use of Mercury, in which, if they speak honestly, and follow their Judgments (and do not give it at the same time when they speak against it, as many do) they will prolong their Cure to no Purpose, and meet with Disgrace at last; it being very sure, that no Species of it will be cured without it. I know, Fernelius and some of his Disciples writ vehemently against it, but the whole Current of the able Practitioners have written on the other Side: And, by what I find by my Experience, I dare say, that Fernelius never cured a confirmed Pox without it, unless the Patient had been in some other Hands before

fore who had fluxed him; in which Case some sudorifick Course prescribed by him might get the Credit of a Cure, whose Foundation was laid in Mercury. I write this the more confidently, because of the many Attempts I have myself made, and seen endeavoured by some worthy late Practisers in our Faculties without Mercury, but by omitting of it our Cures were rendered tedious and unsuccessful, the Ulcers the while spreading and breaking out fresh in some Parts, while we were endeavouring to cure them in others, the Disease becoming more fierce in some of them, whilst their Bodies were purged with Catharticks, without Mercury. Nay, where one of those Inveighers against Mercury gave it in a Course of seven Weeks, he could not, by all his Endeavours of Mercurial Emplasters, Unguents, or Waters, outwardly applied, nor with his Sweating, Diet-drinks, &c. cure one small Herpes in the Face, yet was better paid for his Physick than I was for the Cure.

Vomiting.

Vomiting is of Use in great Disorders of the Stomach, when the Foulness of that requires it, or when the Ulcers of some particular Part require a sudden Revulsion: So likewise, when after the Use of much Mercury, outward or inward, to salivate, it doth not arise kindly, we by this means cause a Motion upward, and derive the Humour that Way.

They are generally strong, if the Party can bear them, *viz.* some Preparations of Mercury, as *Turbith mineral.* &c. or antimonial, as *Crocus Metallor.* in stronger Bodies; but in weaker Constitutions we give such as we may.

Salivation. The next Thing which offers itself to our Consideration, is, Salivation, without which few great Cures are done in this Disease: Nay, when a great Evacuation by Salivation is not intended, we are forced to dispose the Humours that Way by Mercury, that being so disposed they may be rendered more obedient to purging and sweating Remedies. For the Truth of this, I need not produce any Authority, common Experience will make it evident to you; but of this hereafter.

The Methods of salivating are divers, but all by Mercury; besides which Faculty of raising a Salivation, it heals, attenuates, resolves, provokes Urine, and moves noxious Humours upwards and downwards, by which
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not only the more subtle, but the more gross and feculent excrementitious Humours are expelled, and that, according to its several Preparations, either inwardly given, or outwardly applied.

Inwardly are prescribed various Preparations of Mercury, *viz.* *Merc. sublimatus, dulcis, Merc. precipitat. albus, rubr. citr. niger, viridis, &c.* There are also different Preparations of some of these, as the *Turbith Minerale*, the Amalgamations of Mercury with Gold, *Theriaca Metallor, &c.* they purge, vomit, and salivate, or are sudorifick, and are stronger or weaker in their Operations, according as they are freed of their corrosive Quality. The strongest of them are capable of being rendered sweet, and of being dispirited of their vomitive and salivating Qualities.

When we design Salivation by *Mercurius Dulcis*, we give it from 20 to 25 Grains, and sometimes to 30, either in a Spoon-full of white Bread and Milk, or in *conf. ros. rub. conf. boraginis, confect. Alchermes*, or some such like Cordial Electuary. When we suspect it may work by Stool, we prescribe it in *Elect. Diacordii*, or *Theriace* at Night going to Bed, and then it also serves to alleviate their Pains, and dispose them to rest. If after the taking it 4 or 5 Days their Chaps do not swell, it may be reasonable to move it upwards by a few Grains of *Turbith Minerale*. Accordingly as their Chaps swell they will salivate. If their Mouths be much ulcerated and swelled, the Salivation may last 18 or 20 Days, during which they are to be kept warm, especially about their Head, Neck, and Chaps, and to drink Chicken Broth, or Posset-Ale.

In the Declination of the Flux, we prescribe them a *Decoct. Sarsæ*, and before it ceaseth, we purge them with some Cathartick Apozeme, and proceed in the rest, as shall be shewed in its proper Place.

But the salivating with *Merc. Dulcis* alone will scarce cure the middle Species of this Disease: For tho' the Ulcers do cicatrize, and wandring Pains remit thereby, yet they will return, or new Pustules will arise, as that Salivation declineth, or presently after: And indeed I have found better Effects by the frequent Purging with it, mix'd with some good Cathartick, than by the only salivating with it alone.

Merc. Præcipitatus albus may be given proportionably, as hath been said of *Merc. Dulcis*.

Arcanum Corallinum, as it is generally sold in the Shops, may be given from three Grains to five. One Dose of it prescribed by me to a Woman diseased with *Serpigo*, &c. vomited her often, and salivated her 20 Days, contrary to my Intention, but cleared her Skin of its Foulness.

Red Præcipitate is also vomitive, but being well wash'd may be taken as safely as the *White Præcipitate*. But since I practised here in the City, I have not used it. *Præcipitatus viridis* is also vomitive, and the most churlish Preparation of Mercury ; the Dose is much about the same as that of *Arcan. Corallin. Hartman* prescribed it to 8 Grains.

Turbith Minerale, as it is sold in the Shop, is a rough Medicine, but being somewhat dulcorated, first procureth Vomiting, then Salivation, and is proper to make a sudden Revulsion in such Cases where there is a Necessity of giving a speedy Relief to an afflicted Part, and contributeth to the Cure of this Disease in such Cases where *Merc. Dulcis* hath not Force. That which I commend to your Use is made out of *Vigo's Præcipitate*, and may be given from 12 to 18 Grains, but I rarely prescribe it to any that have not first taken *Merc. dulcis*. It takes off nocturnal Pains, and resolves *Gummata* and *Nodes* which have not been of long Continuance, and hastneth the Cure of the most malignant Ulcers that accompany this Disease.

Mercury Amalgamed, with Gold, doth Vomit and raise Salivation, but is generally corrected and made a Sudorifick ; so the *Turbith Minerale* is made Diaphoretick.

Bezoardicum Minerale, and *Æthiops Mineralis* are also Diaphoretical, and of their Use you may see more hereafter.

Mercurius sublimatus corrosivus dissolved in *Aqua fontis* given inwardly doth also raise Salivation and Vomiting, if the Dose be proportioned. It is much commended by some Practitioners, but I never made Trial of it.

This following I have frequently prescribed, and so may you if you please: Rx *Mercur. sublimat.* 3ij. *Cinnamomi, Galangæ, Curcumæ, an.* 3ij. *Croci* 3j *Aq. Fumariæ* flbij. infundantur in Balneo per horas 24, deinde colentur pro usu. The Dose is three or four Spoonfuls in a Morning, and is to be repeated many Days, they drinking Posset-drink, as in other Vomitives.

There is also a way of Salivating by dissolving of *Merc. sublimat.* in a Bath; the Use and Manner of making it you may see in the Chapter of *Elephantiasis*.

Crude Mercury is also frequently prescribed internally to raise Salivation, and is given from one Scruple to two, or higher, cum *Terebinth. Venet.* The Pill *Barbarosæ*, which is a Mixture of *crude Mercury* with *Troch. Alhand. pul. Falap. diagrid. &c.* and is commonly called the *Blue Pill*, purgeth powerfully, and frequently raiseth a Salivation. I made some Trial of it, but it never answered my Expectation; yet may cure the lesser Species at the long run, if the Patient keep his Chamber, and observe a strict Method in Diet, Sweating, &c.

These following Pills were prescribed by Sir *Theodore Mayern* to raise a Salivation. Rx *Terebinth. Venet. cocturæ induratæ, Rhei electi. pulver.* 3ls. *Pulv. Sarsaparillæ* 3j. *Myrrhæ, Gum. Guaiaci, Mastich. Succin. albi, an.* 3ij. *Fol. Auri numero 36. Mercurii Philosoph. vel alias ex Cinnabar. resuscitati ad pondus omnium, Bals. Peruv. q. s.* Dof. 3j. ad 3ij.

There is also a way of raising Salivation by Suffumigation, the Prescription whereof is as followeth: Rx *Cinnabar. 3ij. Merc. crud. 3j. Mastich. Thuris, Sandarachæ, an.* 3ls. *Styracis, Calam. Benzoin. an.* 3ij. f. omnium pul. subtil. qui excipiatur *Terebinth.* q. s. formentur *Trochisci* ad pondus 3ij. pro usu.

When the *Lues Venerea* is grown inveterate, and affecteth the most solid Parts with *Gummata, &c.* and the Habit of Body debilitated and vitiated by the frequent Exhibition of *Mercury*, it then requireth a more powerful Remedy, viz. Salivation by Unction. There are various sorts of them published by Authors, who have treated of the Cure that way; the principal Ingredient in it is Quick-silver, it is that which doth the Work, the additional Materials may be at your own Choice, every one compounding them as they think fit.

You have an Example of one in the *Pharmacopœia Londonensis*, under the Name of *Unguent. Neapolitanum*, that hath four Ounces of crude Mercury to two Pounds of Ointment. By others, Rx *Axungiæ porcinæ* ʒvj. *Butyri* rec. ʒij. *Styracis liquidæ* ʒij. *Hydrargyri triti & extincti* ʒj. *Cerae* q. s. This following is weaker. Rx *Axung. porcin.* ʒij. *Terebinth.* ʒj. *Pul. Ireos, Thuris, Mastich.* an. ʒij. *Olei Cham. Liliori* an. ʒij. *Laurini* ʒj. *Styracis calaminiae* ʒss. *Argenti vivi.* ʒij. M. f. a. Authors have generally proportioned the Quantity of Mercury, according to the Strength of the Patient, and some of them have undertaken to direct you how much of the Unction you shall use at a time; but that would be extreamly troublesome to observe, and may prove dangerous to the Patient at last.

The Unction which I have used for the most part these last twenty Years, hath been made by a Prescription of Sir *Alex. Frasier*, whose Practice with it I had frequently seen with good Success. In it there are six Ounces of crude Mercury to sixteen Ounces of the Materials. If you shall make up an Unction at that rate, you will find your Curiosity in the Choice of the Ointments to mix with the Mercury not to be so very necessary; for I have sometimes raised a Salivation very well, by mixing six Ounces of crude Mercury, extinguish'd in *Terebinth.* with sixteen Ounces of *Axungiæ porcinæ*, and for common People a prepared *Axung.* with an Addition of *Ol. Terebinth.* hath served: For the better sort of People, Rx *Axung. porcinæ* ʒvj. *Unguent. Nervin.* ʒiv. *Unguent. Laurini & Dialthææ,* an. ʒss. *Ol. Vulpini* ʒj. *Styracis liquidæ* ʒij. *Pul. Rad. Ireos Florent.* *Gum. Guaiaci,* an. ʒss. *Ol. Caryophyl.* q. s. *Argenti vivi* extinct. cum *Terebinth.* ʒvj. Mf. The Preparation to this way of Salivating, is by Bleeding and Purging, if their Bodies will bear it; otherwise bathe them, and keep their Bodies soluble the while by Clysters, lenitive Bowesses of *Cassia, Manna, cum Syr. Violar.*

In order to your farther Prosecution of this Course, your Patient ought to lodge near your House, in a close warm Chamber; if the Season be cold, the Windows must be covered with Blankets, and the Bed near the Fire, and encompassed with a Screen, if the Chamber be large. You ought also to have a strong healthy Nurse,

Nurse, such as hath been accustomed to the Employment, that she may, in the Absence of the Chirurgeon, know how to wash the Patient's Mouth, and direct and encourage him in such Rules as may be necessary in the time of Salivating.

The most proper Place for Unction is a Stove, if it may be had; and the Patient can bear it; if he be weak, his Bed must be used, otherwise, for want of a Stove, he must sit, encompass'd with a Screen (as I said) by the Fire side, but not too near it. If in the anointing he use his own Hands, he may save his Chirurgeon much Trouble, and do the Work better than it can be done for him: But if other Help be required, then we arm our Hands with Bladders or Gloves, and fall to it. The old, and still most common Method, adviseth to begin at the Feet, and thence to arise to the Legs, Thighs, Hips, and so upwards on the Spine to the Neck, taking in Hands, Arms, Shoulders. The Belly ought to be avoided; and indeed much of the other Trouble, in weak Bodies, may be spared; for in such, the anointing of the Legs and Arms, (or Thighs, if Modesty prevent you not) will obtain the same, and it is sufficient, if the Mercury mix once with the Blood to such a Degree as to cause a Salivation. Whatsoever the manner of the Unction be, the Parts first anointed ought to be covered before you proceed to the next, as the Legs with Stockings, Thighs with Trouzes, &c. till at last his Neck be well wrapped with a Napkin, tacked up to his Cap round about to his Ears, and fastned before to keep his Chaps warm. After this, a warm Bed will be convenient, and a Draught of Posset-drink, in order to a breathing Sweat. Having so repos'd himself an Hour or two, he may rise and provide for his Dinner, which must consist of Meat of easy Digestion, roast or boiled. To his Dinner he may drink Beer or Ale, with a Toast, the rest of the Day he must be confin'd to Posset-drink. Unction may be repeated twice a Day if you see cause. But if the Chaps swell apace you must moderate your Hand, and, it may be, quite hold it off, lest you bring on the Salivation too fast, and endanger the Patient: When he comes to this State, you must keep him to the use of Posset-drink and Broth, which ought to be ready in Quantity: Also burnt Wine, *Aq. Theriacalis,*

Theriacalis, &c. must be ready to prevent fainting. His Mouth must be syringed with a *Decoēt. Hordei cum Liquiritia, Rad. Althææ, &c.* New Milk held in his Mouth, or Chicken Broth will ease the Pain, and digest the Sloughs that arise. A rolled Clout ought to be placed between his Teeth, to keep his Chaps from closing. He must be raised high in his Bed, if his Weakness constrain him to it, and kept forward, that his Rheum may run out, and not down his Throat; but if he can rise, he will spit better and more plentifully. Salivations by Unctious commonly last twenty four or twenty five Days, sometimes to the thirtieth Day.

In the Height of it, our Work is to keep up their Strength; and if, thro' Costiveness, they spit less, give them a Clyster that they may spit better, and attend the washing their Mouths; but as the Sloughs begin to separate, which will be towards the Declension of the Salivation, prescribe them a Decoction of *Sarsa, &c.* to drink at least thrice a Day; and before the Slough is quite cast off, purge them with some cathartick Apozeme made in some of the aforesaid *Decoēt. Sarsæ;* and as they are able to eat Meat, put them into a drying Diet, and sweat them, &c. as shall be shewed in its proper Place.

It happeneth sometimes, in anointing, that their Mouths are much ulcerated, and their Breaths smell strong; yet their Cheeks do not swell, nor they spit considerably; in which Case forbear the anointing, and consider the Cause of it; and if the Body be strong and plethorick, vomit them with *Turbith. or Infus. Croc. Metallor.* but if they be weak, or costive, administer a Clyster, and if afterwards it arise not, dispose them to sweat with Draughts of warm Posset-ale, or bath them; for that way it will be sometimes raised, when by the other it will not. But if they have Faintness, or Palpitation of the Heart, Shortness of Breath, Fever, &c. your best way will be to purge it off by some Infusion of *Sena, &c. or Decoēt. Senæ Gereonis,* with the Addition of *Syr. Ros. solut. Syr. de Spina cervina, &c.* and keep up their Spirits the while with Cordials and good Broths. If their Lungs be oppres'd, let them Elod, and prescribe *Lobuchs;* but if there be also a Suppression of Urine, or that they make but little Urine, and high coloured, purge them with *Barnet or Epsom Water turned into Posset,*

Posset, and quicken it with some purging Syrup. If, by these ways of purging, the Accidents remit, and the Salivation riseth, it is well; but if it do not, yet there being a Colliquation made, you may, by well purging, strict Diet, Sweating, &c. obtain your end. While you are removing the abovesaid Accidents, you must have a special Regard to the Ulcers within their Mouths; for it is from the fixing of the Mercury that those malign Ulcers are made, which the less sensible they are of them, the more corrupt they are.

Sometimes in raising the Salivation by Unction it passeth downwards by Stool, in which Case we prescribe *Theriaca Diaſcord. Laudanum Opiat. &c.* which being given at Night will not only strengthen their Bowels, but dispose them to Rest, and encourage them to go on in the anointing. A Vomit of *Turbith Minerale*, after the Unction hath been some while used, doth frequently raise the Salivation; and after it is once well raised, you may heighten or continue it by the Application of some of the Emplasters following. But if, after all your Endeavours to raise the Salivation, it doth not discharge itself in a *Diarrhœa* with great Evacuation, you are then to defend the Intestines from the Acrimony of the Humours by Clysters of Chicken-broth, Milk with *Ol. Olivar. Vitel. Ovor.* left a Dysentery do follow. Suppositories of Deer Suet, or *Ol. Hyperici, &c.* cast up with a Syringe, are proper to appease the *Tenesmus*. Inwardly we prescribe large Draughts of Chicken-broth, *Decoct. Corn. Cervi uſti*, Milk and Water boiled with a Stick of Cinnamon.

After the Flux is stopt, you must consider the Strength of the Patient, and the Quantity of the Unction which was applied, and the Greatness of the Evacuation. If it was to the extream weakening of the Patient, do not insist long upon the Thoughts of Salivating again, but proceed with Sudorificks, &c. as abovesaid; not doubting of Succes in the Cure; for such *Diarrhœas* do, for the most part, contribute as much to the Cure as if they had salivated.

There is yet another way of Salivating, and that is by the Application of Mercurial Emplasters about the Arms, Legs, &c. They were first designed, I suppose, for the more tender and delicate sort of People, who

would not admit of the Unction. There are various Prescriptions of them, whereof I shall offer you one, *viz.* Rx Empl. Diachyl. ireat. lbj. Empl. de Minio 3vij. Gum. Caranæ, Tacamahaccæ, an. 3ij. Benzoini, Styracis, Calamitæ, Succini, an. 3ij. Styracis liquid. & Balsam. Peruv. an. q. s. Misceantur super ignem, deinde amove, & addantur Mercur. crudi 3vij. cum Terebinth. extincti, & fiant Magdaleones. These being spread upon Cloth thick, and applied, you must then put them into a warm Bed, and, with a Draught of warm Posset-drink, sweat them daily, and treat them as hath been said in the Salivating by Unction. If it arise not by the first Plasters, you must apply fresh once in four or five Days, and if there be occasion, you may hasten the Salivation by a few Grains of Turbith Mineral. I have sometimes salivated Persons by these Emplasters, but for the most part I use them to raise a Salivation, or continue it in such, where I began it with Internals, and to that Purpose it is of excellent Use.

Sweating.

The Humours being evacuated by Salivation and Purging, *Sweating* will be necessary; therefore we shall now say somewhat of their Manner of Sweating. They may sweat in Bed, or out of it. The *Bed* is proper for the weaker sort, and there they may sweat by Bottles of warm Water, or Bricks heated and placed about them, or they may sweat under a Frame. If they sweat with Bottles or Bricks, they must have many Cloaths, as Blankets, &c. to cover them close, and the Bottles or Bricks may be wrapt in Napkins, and applied, accordingly as you design more particularly to sweat any one Part. Generally they are placed on each Side, near the *Axilla*, the *Ischia*, and at the Soles of the Feet.

If you sweat with Bricks, let them be heated, rather by boiling Water than Fire, lest in the Bed they burn the Patient.

The way by a *Frame* is this; you are to fold a well aired Sheet four double, and lay it under the Patient, then his Shirt being stript off, the Frame must be placed over him, and a Sheet over that Frame, and as many Blankets over that Sheet, and both Sheet and Blankets must be brought over the End of the Frame, and be tucked down close to the Neck; then a Pan of well burnt Charcoal or Spirit of Wine must be put into the lower

lower End of the Frame; this done, shut the Door, and take care that the Heat be kept in, especially about the Patient's Neck, lest it stifle him. His Head ought also to be covered warm that it may sweat. If he took not his Sudorifick before he was placed under the Frame, he may take it now; the Diet-drink must be warmed, and may be commodiously given with a Glass-pipe. There is required a couple of Servants to attend the Patient during his being in the Frame: The one of them must attend him with a warm Napkin to wipe the Sweat off his Face, and to give him Cloths to rub his Body, which Cloths ought to be thrust in and taken out at the one Side of the Frame. This Servant ought to have Regard to his Master, that upon the least Complaint he may give Warning to his Fellow to renew the Fire, or take it out, according as there shall be occasion. The Fire being removed, and the Sheet next the Frame somewhat cool, the one of the Servants shall hold the Cloths close to the Patient's Neck and Shoulders, whilst the other draws the Frame away. Then shall they both tuck the Blankets and Covering close to him, and give him another Draught of his Diet-drink, and continue him in his Sweat half an Hour or more, if he can admit it; then gradually cool him, and pull away the wet folded Sheet from under him; then rub him with dry Cloths, and put on his Shirt; and if he be disposed to flumber an Hour, he may, otherwise he may rise and dine at his Pleasure. They commonly sweat three Quarters of an Hour in the Frame, and an Hour in Bed, after the Frame is pulled away.

These are the ways of sweating in *Bed*.

The ways of sweating out of Bed are by *Stove*, *Tub*, *Chair*, or *Cradle*. The *Stove* is the most easy, in regard they may sit, stand or walk up and down; but when they go out of them to Bed, the Danger is in taking cold, whence new Pains do sometimes arise. Therefore those Stoves that are near to a good Bed are best; the other, which you must go up or down Stairs to, are not allowable. *Tub* and *Chair* were the old way of Sweating; but if the Patient swoons in either of them, it will be troublesome to get him out; possibly he breaks his Shins, if he did not hang some while by the Neck before they got him out. To avoid which,

they

they must take them out upon the least Complaint of Fainting, and have some Cordial to relieve their Spirits.

In the Cradles they are subject to Accidents by the disjointing of the Frame or breaking of the Girts, &c. but in every of these I have sweat my Patients with much Safety, and so may you.

Bathing.

Bathing is of great use in the Cure of this Disease, whether it be new or old. In the recent it serves to temperate the great Heat and Acrimony of the Humours, especially in the *Gonorrhœa*.

In squalid and dry Bodies, where the *Lues* hath been long confirmed, Bathing is necessary to humect and rarefy the Humours, and dispose them to salivate. They are also proper, after the Patient hath passed through the strict Course of Salivating, Purging, Sweating, &c. The Body being thereby dried and emaciated, is hereby cooled, moistened and restored to its natural Temper.

In order to the Bathing we generally let Blood and purge, if there be *Plethora*; but in poor emaciated dry Bodies a Clyster may serve, or their Bodies may be kept soluble by a lenient Bolus of *Cassia*, *Manna*, *Syr. Violar.* &c. and before the Patient enters into the Bath he may drink a Draught of Caudle or Broth, and in the Bath he may take a Spoonful or two of Hart's-horn Jelly, &c.

The Vessel we bath in is a Tub, wherein he may sit up to the Neck. For want of such, a Barrel may serve, the one End being beat out, and a Stool placed in it to sit upon. The Bath Liquor is according to the Occasion and Quality of the Patient; sometimes it is all Milk, other times Milk and Water, or only Water, with a Bag of wheaten Bran, which serves the Patient as a Cushion, and makes the Water Milky. They are sometimes perfumed with *Lig. Cassiae*, *Rhod. sant.* *Citrini*, *Calam. aromat.* *Funct. odorat.* *Flor. Ros. damasc.* &c. The Baths of Milk are apt to sour, therefore ought to be renewed daily, the other will last longer sweet. In the time of Bathing there ought to be Plenty of hot and cold Water to continue the Bath of a moderate Temper, neither too hot nor cold. Some Hoops should be fastened over the Head of the Tub, whereon a Blanket or Sheet, as a Canopy, may be cast, in case the Air be cold. A Servant or two ought also to be attending, in case of Fainting,

Fainting, lest he sink into the Water. Therefore, upon his Complaint, raise him up, and, casting a Sheet about him, put him into a warm Bed, where he may refresh himself, and at his Leisure rise and cloath himself, and dine or sup as his Appetite requireth. They may bath twice a Day, but never upon a full Stomach.

During the Cure of this Disease it will be requisite that the Patient keep his Chamber, and that it be made temperately warm; the taking of Physick and rambling abroad in the Cold being extremely prejudicial to their Cure, and is frequently attended with a *Diarrhoea*, or Noise in their Ears, with Deafness. There is also a special Care to be taken concerning their Diet, that on those Days they purge, their Dinner be of good Nourishment, boiled or roasted. We also allow them good Broth, and Beer or Ale to raise their Strength so as they may be able to bear the Evacuation which is required, but in the time of their Sweating we confine them to a very slender and drying Diet, only sufficient to support their Spirits. A Chop of a Neck of Mutton, or two Ribs dry roasted was the old Stint. I permit them to make choice of some one sort of Meat, and keep them to that, which among the better sort is a Partridge, and that without Sauce. Their Suppers may be Bisket, Raisins of the Sun, and a few blanched Almonds, and their Drink *Decoct. Sarsæ, &c.* But in weak and extenuated Bodies, *China* Broths, or a Mixture of Milk with their Diet-drink may be necessary.

Exercise is of use in the Beginning of this Disease, and may serve to rowze the native Heat, to thrust forth the Malignity, and waste Superfluities. But after the Disease is more confirm'd, violent Exercise is hurtful, exhausting the Spirits too much, and renders them less able to resist the Malignity.

Sleep is allow'd in the Day to refresh them, they being for the most part disturbed in the Night by their Pains, which are therefore called *Nocturnal*.

In the time of Salivation they must sleep when it affects them. To sleep also after Bathing and Sweating is necessary to refresh them.

Venery ought to be avoided during their Course of Physick, it being one main Cause of the Unsuccessfulness of it: Yea, the very Thoughts of it is destructive to

to their Healths; nay, tho' he believed himself cured, I would not have him over-confident that way till he hath passed a Spring or Autumn; for if he be married, and bed with his Wife, and afterwards relapse, he may possibly fancy that she infected him; which may not be unlikely, if he bedded with her before he entred into Cure. However it was, the Consequence of it may be very ill, and may cause a Loathing in him of her Bed, when it is possible he was not well cured, and would have relaps'd with a *Gonorrhœa* or *Chancræ*, though he had not touch'd any Woman.

The *Passions of the Mind* ought to be calmed, and the Patient to be well satisfied in the Integrity and Skill of his Physician or Chirurgeon, that he may the more chearfully submit to the Rules prescribed in order to his Cure.



C H A P. III.

Of the Specificks in this Disease.

IN the former Discourse I have had occasion to speak of the *Decoct. Sarsœ*, &c. as Sudorificks. Indeed those kind of Decoctions are the great Hinges, on which the Cure depends, as being supposed to contain in them, besides the sudorifick Virtue, other specifick Qualities. Which Appropriation of some Simples to the Disease more than others makes it necessary, before I proceed any farther, to discourse of the Nature of these Specificks, which I reduce to three Heads, viz. either *Vegetable*, *Antimonial*, or *Mercurial*.

Specificks. The Vegetables are usually reckoned these; *Guaiac. lig. & cort. lig. sassafras, rad. chinæ, sarsaparilla, saponaria.* Of these all but *saponaria* are known Sudorificks, and may be easily supposed to perform all that is pretended to by them, by that only Faculty, unless we please to add

add Dulcification. Whether *Saponaria* be a Sudorifick I know not; nor indeed whether it ever cured the Pox, otherwise than in Conjunction with the former Specificks, and so any other Herb will do it. *Laureola* is in the West of *England*, much commended. I suppose what it doth is only by strong Purging; and when it is mix'd in Diet-drinks, it serves to keep the Body open. What other Vertues it hath, I know not.

Antimony and *Mercury* are Medicaments of so large a Compafs, that they take in all the Intentions of Phyfick. Hence we have Vomits, Purges, Sudorificks, Salivations: Vomiting and Purging are certainly of great Use in this Disease; so is also Sweating, which is very effectually procured by several Preparations of both these, viz. *Ceruffa Antimon.* *Diaphoret.* &c. *Bezoard.* *Minerale,* *Aethiops Mineral,* &c. They have the Vogue of exceeding other Medicines, both by their Strength and Power of Dulcification. And therefore it is that in Purging also we make so much use of Mercurial Preparations. But that Mineral hath also another Faculty more eminent than all these, so peculiar to it self, that we find not yet any other Medicine, Mineral, Vegetable or Animal that can imitate it, and that is Salivation; by Virtue of which it melts down the Serum of the Blood, and with it all the acid Venom contracted in it by this Disease; bringing it away by the Mouth.

These are the so highly commended Specificks, of which the former are the constant Ingredients of the Decoction to be taken during the whole Course, but are accommodated to the Palate and other Necessities of the Patient by the Addition of other Simples. Mercury is also boiled either crude or prepared. So is Cinnabar and crude Antimony, which Practice I have declined, and therefore I shall not say more of it. I shall only proceed to inform you how to mix other Simples with these already mentioned, as Occasion shall require.

First therefore for Aromatization we add *Sem. anisi,* *fænic.* *dul. coriand.* *calamus aromaticus,* *lig. aloes,* *cassia:* For other Gratefulness, *Liquorice,* *Raisins,* *Ivory,* *Harts-horn.* In Complication of Diseases, if the Head be affected, we add *Betony,* *Sage,* *Rosemary.* If the Breast, *Adianth.* *Tussilago,* *scabiosa,* *marrubium,* *Hyssop,* *Figs,* *Dates,* *Sebestens,* *Fujubes.* If the Heart, *Rad. angelicæ*

Borag.

Borag, Violets, Balm, Scorzonera, Scordium, Clove-July-flowers, Saffron. If the Stomach, Wormwood, *Agrimony, Centaur, Card. Benedict.* If the Liver, Rhubarb, Turmerick, Liverwort, Succory, Dock-root. If there be Dropsy join'd with it, then *Briony* of both sorts, *Spurge, Laurel, Esula.* For the Spleen, Dodder, Fern, Capers, Tamarisk, Spleenwort, *Germander, Calamint, Hellebor,* &c. In the Diseases of the Kidneys, the five opening Roots, also *Rad. Althææ, Gram. Ruscæ, Alkekengi, Eryngii, the cold Seeds, &c.* If the Cholick infect the Patient, *Bacc. Laur. Juniperi, Galangal, Zedoary, &c.* Then there are the greater and lesser *Scorbuticks*, also *Rad. Bardan.* and *Petasitidis*, which are believed to have Vertue to mitigate Pain in the Membranes of the Bones, and resolve Nodes; also *Rad. Caryophyllatæ consolid.* *Bistort. Tormentil.* and many others which are thought proper to be added to Decoctions, and to medicate Ale or Hydro-mel. All which several Forms of Medicines may be varied according to several Intentions. In weak Stomachs we add Wine to the Decoctions. In emaciated Bodies Milk. Of the *Sarsa* Decoctions I shall, for the Ease of the young Chirurgeons, set down some particular Prescriptions, such as I have seen prescribed by worthy Physicians, and have practised with my self successfully.

1. Decoct. Rx *Sarsaparillæ* ʒvij. lig. *guaiaci* ʒiv. cort. ejusdem ʒij. *sarsæ, &c.* lig. *sassafr.* ʒjls. ras. corn. cervi, eboris, an. ʒvj. infund. per noctem in aq. font. ℥xx. deinde coq. in vase clauso ad tert. part. consumpt. addend. sub finem fol. saponar. cum radicib. M. ij. fol. agrimon. veronicæ utriusque, an. M. j. passular. enucleat. ʒvj. sem. fænic. dul. coriand. an. ʒvj. liquiritiæ Hispan. ʒij. aromatizetur colatura cum paucō cinnamomo pro usu. X

2. Decoct. Rx *Sarsaparillæ* ʒvj. lig. *sanceti* ʒij. cort. ejusdem ʒj. *sarsæ, &c.* lig. *sassafr.* ʒij. rad. bardan. scorzoner. an. ʒj. *santal. albi citri.* an. ʒls. fol. laureol. præparat. cum aceto M.ij. passular. enucleat. ʒiv. rad. glycyrrhizæ ʒj. sem. fænic. dul. coriand. an. ʒls. infund. in aq. calid. ℥xij. coq. ad tert. part. consumptionem.

Rx Rad.

Rx Rad. Sarsaparill. 3vj. lig. guaiaci 3ij. cort. ejusdem 3j. 3. Decoct. rad. chinæ nodos. 3ij. lig. sassafr. 3js. ras. corn. cerv. sarsæ, &c. eboris, an. 3j. rad. bardan. 3ij. santal. rub. alb. calam. aromat. an. 3vj. passular. ma. exacinat. M. j. sem. anisi, fœnic. an. 3ls. infund. in 16vj. aq. font. per horas 24. in loco calido in vase bene clauso, deinde coq. lento igne ad consumptionem tertiar partis, addendo sub finem decoctionis fol. summitat. uphraſiæ, beton. salviæ sic. & flor. 3. cordial. an. P. i. cassiæ lig. 3ls. nuc. moschat, numero 2. cole-tur pro usu.

Rx Sarsaparillæ 3vij. scobis guaiaci 3iv. sassafr. 3ij. rad. 4. Decoct. bistortæ, bardanæ, tormentillæ consolid. mast. an. 3ij. fol. sarsæ, &c. agrimon. scolopend. utriusque, ceterach, endiviae cum toto, an. M. j. sem. anisi, fœnic. dulc. coriand. an. 3ls. passul. ma. enucleat. 3iv. liquiritiæ ras. 3js. post debitam mace-rationem in aq. font. 16xx. coq. lento igne ad medias aro-matizetur cum paquo cinnamomo.

Rx Sarsaparillæ 3iv. lig. guaiaci 3ij. cort. ejusdem 3ij. 5. Decoct. sassafr. 3js. rad. petasitidis, bardanæ, an. 3js. lig. sarsæ, &c. Rhodii, santal. citr. an. 3j. sem. cardui benedict. juniperi recent. an. 3vj. cort. exterior. citri siccata. 3ij. infund. in aq. font. 16xij. per noctem, & coquantur ad dimidias.

Rx Sarsaparillæ 3vj. chinæ 3ij. sassafr. 3j. lig. nephrit. 6. Decoct. 3ij. ras. corn. cerv. & eboris, an. 3ls. santal. albi 3ls. sarsæ, &c. rad. petroselini, graminis, rufici, eryngii, an. 3j. liquiritiæ 3ij. dactyl. exossat. numero vj. sem. carui, coriand. an. 3ij. infund. in aq. font. 16xiv. coquantur s. a. & aromatize-tur cum ligno Cassiæ.

Rx Rad. Sarsaparillæ 3vj. ras. corn. cerv. santal. alb. 7. Decoct. an. 3ij. fol. sapon. agrimon. beton. an. M. j. liquiritiæ sarsæ, &c. Anglic. Hispan. an. 3ls. f. infus. & decoct. in aq. font. 16ix. ad vj. vase clauso. Colaturam effund. super fol. co-chlear. hortens. M. vj. post debitum refrigerium fiat secun-da colatura.

Rx Sarsaparillæ 3ij. scobis guaiaci 3j. cort. ejusdem 3ls. 8. Decoct. lig. sassafr. 3j. rad. tormentillæ, bardanæ, vincetoxicæ, sarsæ, &c. an. 3ls. ras. buxi & lig. Rhodii, an. 3ij. baccar. juniperi

peri recent. ʒls. sem. cardui benedict. & oxalydis, an. ʒij. flaved. citri ʒj. f. infus. in duabus partibus aquar. petroselini, parietariae, melissae, & una vini albi, utriusque ad libvj. & post macerationem coquantur ad medias: colaturae adde guttas aliquot sp. vitriol. aut sulphuris, & reservetur pro usu.

9. Decoct. Rx Satsaparillæ ʒiv. lig. guaiaci interioris resinosi ʒij. sarsæ, &c. cort. ejusdem ʒj. safffr. ʒvj. rad. bardanæ, scorzonerae, contrayervæ, tormentillæ, petasitidis, an. ʒjls. macerentur in libv. vini albi tenuis super cineres horas 24. deinde additis aq. font. libxij. coquantur ad medias, addendo sem. anisi, fænic. dulcis, coriand. an. ʒij. liquiritiae ʒij. coletur pro usu.

Rx Sarsaparilla ʒx. rad. chinæ ʒiv. rad. filicis fæm. recent. ʒij. santal. albi ʒij. ras. cornu cervi, eboris, an. ʒjls. infund. per horas 12 in aq. hordei libxx. & coquantur ad tertiarie partis consumptionem, sub finem addendo passular. ma. enucleat. libss. deinde fiat colatura per manicam Hip. addendo pro singulis libris liquor sacchari optimè ʒj. sem. coriand. ʒj. & reservetur in lagenis lapideis subere obturatis in loco subterraneo frigido.

Electuaries. After Decoction some of the following Electuaries may be prescribed to provoke Sweat, the Patient drinking a Draught of some of the forementioned Drinks warm after them.

Rx Sarsaparilla pulver. ʒij. lig. guaiaci interioris resinosi ʒls. cornu cervi usci, troch. e viperis, an. ʒj. santal. citr. tormentillæ, succini, an. ʒls. antimonii, diaphoret. ad. pondus omnium, cum syrup. de pomis alterant. de rubo idæo, an. part. æq. f. electuarium, dos. ʒj. superbibendo decoct. sarsæ ad sudorem provocandum.

Rx Sarsaparilla pulv. ʒvj. rad. chinæ nodosæ ʒij. oculor. cancr. cerussæ, antimonii, an. ʒij. gum. guaiaci ʒls. Bezoard. occident. ʒj. ambregriseæ gr. viij. confect. alchermes ʒj. syr. e cor. citri q. f. opiatum.

Rx Bezoard. minerale ʒj. pulv. viperar. ʒls. Mf. f. bolus cum syr. de cort. citri. Sum. mane superbibend. haust. decoct. sarsæ, &c.

Rx Anti-

R_x Antimonii diaphoret. gr. xiv. lapid. contrayervæ ol. sassafr. gut. iiiij. confect. alchermes q. s. f. bolus; capiat ante ingressum hypocausti.

In case of Pain, or Diarrhoea from Mercury: R_x Antimonii diaiphoret. 3ls. laudani gr. iis. cons. ros. rub. 3j. syr. garyophyl. q. s. Ms. Sumat hora somni. Or, R_x Diascordii 3j. lap. bezoar. orient. gr. viij. corn. cerv. usti gr. x. confect. alcherm. 3j. cum ol. cinnamomi gut. 5. f. Bolus. Sumat hora somni. Or, R_x Cons. rub. vet. 3j. Theriac. Venetæ 3ls. cons. lujulæ 3ij. laud. gr. iiiij. confect. alchermes 3j. Sumat bis in die.

These following Prescriptions are Sir Theodore Mayern's.

R_x Guaiaci. 3iv. cort. ejusdem 3ij. sarsaparillæ 3vj. Electuar. gum. guaiaci, troch. viperar. an. 3ls. corn. cerv. primar. Antisiphirecent. succini albi; corall. rub. margaritar. an. 3j. santal. licum. citr. lig. Rhodii, ras. buxi, rad. aristoloch. utriusque, gentianæ, valerianæ utriusque, asclepiadis, scorzoneræ, angelicæ, imperatoriæ, tormentillæ, contrayervæ, zedoariæ, pœoniæ maris, cypri, enul. campan. an. 3vj. folior. siccata. scordii, chamædryos, chamæpityos, centaur. min. meliss. rut. calendul. anthos, lauri, veronicæ, utriusque ulmariaæ, an. 3x. cort. ritri & aurantior. siccata. an. 3iis. sem. anisi, sœniculi, cardui benedicti, nigellæ Roman. pœon. an. 3v. baccar. junip. 3ij. myrrb. styrac. calam. benzoin. croc. an. 3ls. fiat omnium pulv. subtil. cui adde pro singul. 3vj. mellis despumati 3bj. fermentetur per duos aut tres menses. Dosis 3ls. superhausto Decoct. sarsæ, &c. ad sudoris provocationem semel quotidie per xxx dies: Et si catharticam cupis, adde pulver. sennæ, turbith. & hermodactylor. an. 3j. pro Dosi.

R_x Raf. lig. guniaci 3vj. cort. ejusdem, ras. buxi, an. 3vj. sassafr. chinæ, an. 3x. cort. median. ulni, fraxini, radicum vincetoxici, scorzoneræ, tormentillæ, bardanæ, petasitidis, baccar. juniperi; an. 3ls. santali citri, lig. Rhod. an. 3iv. rad. cichor. 3iij. sem. cardui benedicti, coriand. præp. an. 3ij. fol. agrimonie, pimpinellæ, beton. salviæ hepaticæ, an. M.ij. sem. halicacabi, meliss. milii solis, an. 3ij. flavedinis exterioris cort. citri siccata 3iv. Turbith. sennæ, hermodactylor. an. 3vj. vini albi tenuis 3xxx. incisa vel

contusa macerentur 24 horas in prædicti vini hæc. & coq. ad medias. Liquor calidus indetur doliolo, & affundatur residuum & obturetur, sinantur residere per quatriduum, postea bibat 3vj. mane & sero.

Rx Ras. guaiaci 3x. cort. ejusdem sassafr. an. 3iv. sarsæ 3vij. passul. ma. enucl. hæc. rad. bardan. siccata. tormentil. scorzoner. contrayeru. an. 3ij. bacc. juniperi 3ijs. fol. agrimon. pimpinel. sicca, an. Mj. coquantur in sacculo laxo in gallonibus vj. ad 4 partis consumptionem; postea infund. in alio sacculo in prædicti liquoris ferventis colati gall. iv. fol. sennæ, sem. carthami contus. an. hss. cort. & rad. esula 3iv. hermodact. Turbith. gummosi, an. 3vj. sem. anisi, fænic. dul. coriand. an. 3ij. & suspende mal. aurant. garyophylis transfixum; fiat in doliolo castæ capacitatis fermentatio, & postea obturetur vasculum, & bibatur mane & vesperi cum diæta tenui & exsiccatante.

Rx Utrumque sacculum post debitam coctionem & infusionem nec non mediocrem expressionem in liquore prædicto, & coquantur in cervisia recent. gall. viii. ad quartæ partis consumptionem pro potu ordinario. Aromatizetur cum aurantiis duobus transfixis Caryophyl. & flaved. cort. citri & pomor. fragrantium.

Aqua An. Rx Succor. recent. express. fol. bardan. petasitidis, carthiphyllica, dui benedicti, card. Mariæ, calendulæ, ulmariæ scabios. Sir Theod. meliss. cannabis aquat. tarsi, barbati, salviae, beton. fraxini, chamedryos, pimpinell. hyperici, an. hiij. dent. leonis, cichorei, lujulæ, acetosæ, oxylapathi, nasturtii aquat. colelear. utriusque, becabungæ, an. hiij. rad. recent. filicis fæmin. hæc. bardan. petasitidis, caryophyl. pentaphyl. tormentil. enulae campanæ, cypri valerianæ utriusque, pæon. maris, an. hæc. calami aromat. ireos, flor. gentian. zedoar. aristoloch utriusque, vincetoxici, cort. citri, aurantior. an. 3vj. ras. lig. sanct. sarsæ, an. hæc. cort. lig. sancti, buxi rotius, sassafr. lig. Rhod. santal. citri, an. hss. baccar. juniperi hss. sem. anisi, coriand. fænic. dulc. pæon. an. 3vj. vini albi tenuis hvj. aq. fontis hxx. Radices & ligna macerentur in vino super cineres calid. per. hor. 24. addantur postea succi & aquæ, & distillentur in vase æneo ampio cum capitello, & coletur post validam magnatis expressionem. Fiat liquoris expressi distillatio ad mellaginem, quæ

quæ addito saccharo, aut mel'e despumato reservetur in vase bene clauso. Magmati affunde aq. font. ℥lx & post duorum dierum macerationem distilla pro aqua secundaria minus forti, quæ cum primaria in morbis minus contumacibus misceri potest, aut cum decocto secundario guaiaci pro potu ordinario.



C H A P. IV.

Of the Cure of the Symptoms.

THAT which now remaineth to be considered of, is the right Application of the Medicaments in curing such Symptoms as the LUES is subject to. Fallopius, and others, who taught to cure this Disease by Galenical Remedies, have taken much Pain in contriving Medicaments for the curing the *Chancre*, *Herpes*, &c. but that will be needless here. The Method of Cure I have proposed by Internals will enough contribute to the Cure of all the external Symptoms; so that only which is required from us will be the resisting the Fluxion till our internal Remedies have taken place.

In Inflammations, Swellings and Excoriations of the Penis and Pudenda: Rx *Summitat. rubi*, *equiseti*, *ling. cervin. fol. plantag. an. M.j. flor. ros. rub. M. ss. coquantur in aq. font. ad ℥iv.* *Colaturæ adde mellis com. ℥ss. aluminis roch. ʒij. iterum finant. parum bullire, & decoctum despumetur.* Foment the diseased Parts, and inject of it between the Prepuce and Glans, or in the Pudendum. If there be required more Detersion (through the Neglect of the Patient in not discovering the Malady more timely) add *mel. Ægyptiac.* proportionably as you see Cause, and dip Pledgits of Lint in the Lotion, and apply them upon the Ulcerations. If the Ulcer be in the Urethra, Rx *Aq. germinum querci, plantag. & fragariæ, an. ʒij. troch. alb. Rhasis pul. ʒij.* If that Place be affected with a Chancré, then add *mel. Ægyptiac.* instead

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stead of the Trochisk. But if Chancres arise in such Places where you can see to apply the Medicament, touch them with *Lac sublimat.* or apply Pledgits of Lint dipt in it, and press'd out. If this prove too sharp, dress them with the former Decoction.

If a Swelling arise in either or both the Groins, and no other Symptom of Chancre, &c. afflict the Patient, endeavour Suppuration by such like Emplaster: Rx *Gum. galban. ammoniaci, an. ʒij. opopanaxis, sagapeni, an. ʒij. sem. sinap. pyrethri pulv. an. ʒvj. sapon. com. ʒij. picis Burgund. ʒiv. ol. lilior. ʒij. ceræ q. s. f. empl.* After Suppuration open it, and treat it as hath been elsewhere said in the Chapter of *Bubo.* But if there be a Chancre, &c. accompanying it, do not attend Suppuration, but purge it off with Antivenereals.

In Ulcers of the Tonsils and Palate: Rx *Trachelii totius M. iij. caprifolii, prunellæ veronicæ masc. an. M. j. flor. ros. rub. P. j. Santal. rub. lig. juniperi, an. ʒij. f. decoct. in aq. bord. ჩiv. coq. ad tertiae partis consumptionem. In colat. dissolute syr. de rosis siccis, diamori, an. ʒijj. mel. elatim. ʒij. f. lotio.* With this the Ulcers may be washed daily, either by a Syringe or Gargling. But if the Ulcers be behind or over the Palate, the best way to cleanse them will be to pass the Injection up into the Nostrils. During the while the Patient must hold his Mouth full of Water to prevent coughing or kecking. If the Ulcers be sordid, dress them with *lac sublimat.* upon an armed Probe. If there be a *Caries* in the *Os Palati,* touch it with *Aq. divina Fernelii.* In case the Bone be corrupted through, it will be necessary that the Place be supplied by some Plate, or Paste: The for former are made of Silver or Gold by our Workmen to good Advantage.

*Laminae.
catagmatis.*

Those of Paste may be made as followeth: Rx *Mastic. pellucid. pulver. ʒj. emolliatur in sp. vini, olibani, sandarac. cum guaiaci naturalis, sang. draconis, rad. iris Florent. myrrhæ, corn. cerv. usci, succini, an. ʒij. Ms. & f. pasta, ex qua formentur Lamellæ;* which being filly applied to the Part, will dispose the Ulcer to heal, and serve those ends you design it. But if some part of that Bone be carious, Rx *Laminae prescriptæ ʒj. aristoloch. rot. ʒj. rad. pucedani, gentianæ, an. ʒls. carophyl. ʒij. pulveriz.*

riz. & misceantur cum paucō terebinth. Cypr. s. a. profū.

In Ozæna, or Ulcers of the Nose, and Os ethmoides, the Matter usually mixing with the excrementitious Humours, dryeth in the Passage, and therēby prohibits the Discharge, and increaseth the Ulceration, and also the Caries: therefore you are in the first place to supple and remove that by casting up mucilaginous Decoctions of this sort: Rx Hord. mund. ʒij. rad. althææ ʒij. sem. cydon. ʒij. liquiritiae ʒij. coq. in aq. font. ad ℥ij. colaturæ add. olei amygd. dulc. ʒij. injiciatur sœpe in die. The Mucus being thus remov'd, inject some of these following.

Rx Sarsaparillæ incisæ ʒij. infunde per debitum tempus in ℥ij. aq. plantag. deinde coquantur ad mediæ: ante finem adde fol. agrimon. salvie min. summi. rubi, an. M. j. flor. ros. rub. balaust. an. M. s. colatura sepius chalybeatur, & adde alum. roch. ʒij. f. injectio.

Rx Succi beton. ʒij. succi scrophulariae maj. ʒvj. succor. Mel Mampinellæ, caprifolii, an. ʒij. mel. rosat. colati ʒiv. mel. gistræ. com. ʒij. coquantur ad constantiam mellis pro usu.

Rx Aq. calcis ℥j. mel. magistralis ʒij. Ms. Which Aq. calcis is thus made:

Rx Calcis vivæ ℥j. aq. pluviaæ ℥vij. coq. ad tertias, filter it through a brown Paper for your Use. Or, Rx Aquar. ros. rub. beton. majoranae, an. ʒiv. sp. vitrioli dulciati gut. xxx. mellis magistralis superscripti ʒij. These will deterge the Ulcers, and the while you may, by Antivenereals, hasten the Exfoliation of the Bones, and Consolidation of the Ulcers. In the Extirpation of Verrucæ, Mariscae, Condylomata, Ficus, &c. Aq. divina, lac, sublimat. sp. vitrioli, and lap. causticus are proper; Where these will not serve your Purpose, the Ligature or Knife or actual Cautery will; but the Recidivation of them must be prevented by Antivenereals.

To cure fluttering Noise in the Ears, &c. arising in this Disease:

Rx Cort. Guaiaci ʒj. cort. safffr. ʒj. castorei ʒiv. flor. lavendulæ ʒjs. caryophyllor. ʒls. sp. vini rectificat. ʒvij. f. infus. in vase vitro per horas 24. super cineres calidos; colatura usui servetur: indatur auribus quotidie tepide cum bombyce.

To alleviate Pains, Rx *Axung. suillæ* ʒij. *ol. scorp.* ʒij. *ol. chamæmel.* *rorismarini,* *salviae chymic.* an. ʒls. *olei petrolei,* *spicæ,* an. ʒj. *laudan.* *Londinensis* ʒj. plus aut minus misceatur; and embrocate the Part affected.

If there be *Gummata*, apply *Emp. è Bolo,* &c. to prevent Ulceration till Internals take place. If *Nodes* be the Cause of the Pain, foment them with *sp. vini* wherein *Opium* and *Saffron* hath been dissolved. Or, Rx *Emp. de Vigone quater duplicato mercurio* ʒij. *rad. bryoniae nigrae siccatae pul.* ʒvj. *cinnab.* ʒij. *croci* ʒiv. *opii* ʒij. *ol. nuc. moschat.* ʒj. *terebinth.* q. s. Or a Solution of *Argent. viv.* in *aq. fortis cum axung. porcina & cera:* f. *Ceratum.* If you will proceed higher, and ulcerate the Skin, this Linament of *Hartman* will do it. Rx *Unguent. aurei* P.ij. *merc. sublimat.* P.j. If you apply it thick-spread, it will eat to the Bone, and if it be not kept within compafs, it will ulcerate the Skin as far as it spreads; but being discreetly applied, it seldom fails: But in my Practice I rarely use any of them, unless it be in People, who, by reason of their Weakness, are not able to bear a severe Course of Physick; for in others I commonly resolve them by vertue of the internal Remedies; they resolving either in the time of salivating or sweating. Nor do I lay open the *Gummata*, unles they be in *Cranio*, and there indeed we ought to open them, to prevent rotting of the Bones and Membranes underneath. But when Ulcers with *Caries* come under my Hands, I dilate the Ulcers, and make way to the Bones, and treat them as hath been set down in the Chapter of Ulcers with *Caries*; they not differing otherwise, save that in these the Patient ought to continue in the use of Antivenereals during the Cure. In consideration that these diseased People are confined to their Chambers during their Cure, it will be reasonable to make their Confinement as pleasant as we can; to which end the following Perfume may be useful.

Rx *Guin. guaiaci* ʒj. *mastic.* *benzoini,* an. ʒij. *styracis,* *calamite,* *lig. rhodii,* *aloes,* *flor. damasc.* *santali,* *citri,* *juniper.* *summitat.* *rorismarini,* *lavendulæ,* *majoranæ,* an. ʒls. f. *omnium pulvis crassiusculus,* qui cum aq. ros. irroretur; huic addita dupla quantitate carbonum *salicis* cum mucilagine *tragacanth.* in aq. *naphæ extract.*

A A A A A A A A A A

*Observations of the lesser Species of Lues
Venerea.*

A Young Man having been debauch'd into lascivious Company, complained to me the Day after, and shewed me the Prepuce much inflamed and swelled, and turned backward; there was also an Excoriation between the *Glans* and Part of the Prepuce. I fomented the *Penis* with red Wine, and applied Pledgets of Lint pressed out of the same on the Excoriation, and *Ung. alb. camphorat.* over all, leaving a Passage for Urine, then let him blood in the Arm about ten Ounces. A Clyster was administred some Hours after; and that Night, at his going to Bed, I sent him a *Bolus* of *Conf. Ros. 3ls. Merc. dul. 9j.* and purged it off next Morning with *Manna* in Posset-drink, and dressed him the same Morning with *Decoët. Plantag. summitat. rubi, Equiseti, &c.* By this Method of Dressing, and by the repeating the Use of the *Merc. dul.* alone, and, with Purgatives, I dried up the Ulceration and Inflammation, leaving the Prepuce lax as formerly. I had Thoughts of prescribing him a longer Course, but he continued well without it.

Another came to me with an Inflammation of the Prepuce; it was swelled over the *Glans*, and, by the Quantity of fetid Matter which it discharged, I supposed a Gonorrhœa, at least a great Excoriation between the Prepuce and *Glans*. I fomented it with *Decoct. Plantag. summit. rub. Equiseti, &c.* and injected some of it with a Syringe, and lapped a Stupe about it, and continued that Method of dressing it twice a Day, sometimes adding a little *Mel. Ægyptiac.* to the Decoction. I also let him Blood, and repeated the Method of Purging, as in the former Observation, till I had healed the Ulceration, and relaxed the Swelling. Then returning back the Prepuce, and observing that the fetid Matter had proceeded only from an Excoriation between the Prepuce and *Glans*, I dismissed him without putting him into other Course of Physick.

I. Observation of Inflammation and Excoriation of the Penis.

2. Observation.

3. Observation of Inflammation of the Prepuce.

One came to me with an Inflammation, and great Swelling of the *Glans* and *Prepuce*, this latter being turned back *in coitu*, straitned the *Glans*, and hastened those Accidents of Inflammation, &c. and would soon have gangrened in spite of all Applications: To prevent which I prepared to divide that Part of the *Prepuce* which made the Stricture. It was not easy to find the way to it, by reason of the Inflation of the upper Tuncle; but having passed a Director under it, I cut through the Stricture, and gave liberty to the *Glans*, then fomented the diseased Parts with *Decoct. Plantag.* &c. and rolled a hot Stupe over it, then let him bleed, and treated him as Venereal. The next Day I found the Swelling discussed, and the *Prepuce* lie flaccid and natural; the Wound cured in the Skin a few Days after by the common Applications. This turning back of the *Prepuce* is frequently seen in young Lads who wantonly handle it. Sometimes it happeneth in conjugal Rites, and, not being returned soon over again, it straitens the *Glans*, and accordingly hastens the Accidents of Inflammation. The Cure is effected by timely fomenting with Emollients; but if that way fail, you must divide the *Prepuce* as abovesaid. In some of those who have the *Prepuce* very short, the *Frænum* is also so straight, that, upon the Erection of the *Penis*, the *Glans* is pulled downwards, so as they cannot endure Coition. The Remedy is by cutting the *Frænum* in pieces. If you suspect that the divided End may be troublesome, clip them off at the same time, then put a Dossil of dry Lint close between the *Glans* and that part of the *Prepuce* to prevent the Coalition of them.

4. Observation of the *Prepuce* gangrened.

A young Fellow came to me with the *Prepuce* inflamed, a Mortification on the upper part of it, which had spread the Compals of a broad Shilling on that Part *gangrened*. over the *Glans*. In scarifying the *Eschar* I found it had penetrated through, upon which Consideration I made Suppuration of the *Prepuce* with a Pair of Scissors, cutting it off round, then dressed it *cum pul. Galeni & albumine ovi*; the next Day I gave him a lenitive *Bolus*, which purged him moderately. In the making Extirpation of the *Prepuce*, I had permitted him to bleed freely, and by the lenient Purge his Body was cooled, so that at the next Opening I found the Sore digested.

I dressed it with *digest. ex Terebinth.* and the Excoriation about the *Glans* with *Unguent. alb. camph.* The Day after I purged him again with the same Lenitive and *Calomel.* By the reiterating of those Purgations he was freed of the Malignity. The *Penis* was cured by the common Applications in such Cases proposed in the Method of Cure.

One coming to me with a Chancre on the Outside ^{5. Obser-} of the Prepuce with *Callus*, I sprinkled it with *Merc. vation. præcipit.* and applied a Pledget of *Unguent. diapompholyg.* over it with Bandage, then let him blood, and purged him with *Decoct. amarum,* giving him *Merc. dul.* every other Night, sometimes two Nights together. After the Application of the Precipitate two or three times, I dressed the Chancre only with a Pledgit pressed out of *Aq. calcis*, by which, with the Help of the Internals, it was soon cicatrized, and the *Callus* resolved. The Reliques of the Disease, which I supposed to be lurking in the Body, I carried off by the continued Use of the Antevenereals, and concluded the Course *decoct. sarsæ, Sweating, &c.*

A Man of about twenty six Years of Age, of a full ^{6. Obser-} Body, came to me with a Chancre between the *Glans* and *vation.* Prepuce on the right side: I dressed it with *lac sublimat.* I let him blood, and purged him with an Infusion of *sena, rhab. &c.* in a *decoct. tamarind.* with *syr. de spina cervina*, and *syr. ex infus. ros. cum agarico.* The same Night, after his first Sleep, he took $\vartheta j.$ *calomel.* in 3fls. *conf. cichorei,* and the next Morning I purged it off with some of the former Infusion. The second Day after I purged him with *pil. cockiae min.* 3fls. *merc. dulc.* $\vartheta j.$ and from that Day purged him proportionably as his Strength would bear, increasing or diminishing the one or other of them, so as to avoid making his Chaps sore. The Ulcer being thus cured, and no Hardnels remaining, I then prescribed him a *decoct. sarsæ, &c.* and designed the sweating of him; but he finding himself well, thought it unnecessary, and did not drink four Quarts of his Diet-drink, yet continued without Relapse.

One of about forty Years of Age, of a gross Body, ^{7. Obser-} had a small Chancre on the left side of the *Glans*, I *vation.* sprinkled it with *merc. præcipit.* and applied over it a Pledgit of *unguent. diapomphol.* then let him blood, and the

the next day purged him with *pul. cornichini* 3j. which gave him fourteen or fifteen Stools. The Day after I purged him again with ~~one~~ *pul. cornichini* 3ss. *merc. dul.* 3j. I dressed the Chancre with a Solution of *mel. Ægyptiac.* in a little of the *decoct. plantaz. equiset.* &c. upon Lint, and left some of it with him to dress himself daily. I also left with the Patient some Papers of *pul. cornic.* with and without *calomel*, which he took interchangeably. He had a strong Body, and being pleased with the working of the Physick, he took it daily, and many Days after the Chancre was cured and the Hardnels resolved: But the Weather growing cold, he neither drank his Diet-drink, nor sweat; nor, in truth, did I think it so very necessary. A Month or two after he shewed me a round crusty Ulcer rise upon his Arm, and such another upon his Thigh and Breast: I let him blood, and repeated purging, and by three Doses of *Turbith Mineral*, given at distant times, purging him between each Dose. I avoided the making his Chaps sore, and dried the Ulcers, and by a Course of Diet-drink and Sweating secured him from relapsing.

8. Observation of a Chancre in Urethra and Frænum. A Man about thirty six Years of Age came to me with some small corrosive little Ulcers on the *Frænum*, and on each side of it; also a large Chancre in the very Entrance into the *Urethra*, with a hard *Callus* round that Part of the *Glans*. I touch'd the Ulcers with *lac sublimat.* and applied over them Pledgets pressed out of the vulnerary Decoction. I let him blood soon after, and gave him that Night 3j. *Calomel*, and purged it off the next Day with an Infusion of *Sena*, &c. for more speedy Relief of the *Frænum*; I gave the next Morning 3ss of *Turbith Mineral*; it vomited him thrice; after which I gave him a Draught of the Infusion of *Sena*, and purged it downwards. By this I check'd the Erosion in the Ulcers, but the *Frænum* was so far fretted, and withal so painful, that I divided it, and with the Vitriol Stone rubbed the broken Ends thereof, and continued dressing it as abovesaid, and by frequent Repetition of Antivenerall Purgatives, I cicatrized those Ulcers about the ~~whole~~ *Frænum*. The Ulcer within the *Urethra* healed ~~so~~ much about the same time. The *Callus* on the Top of the *Glans* joining to it was a longer Work, but was resolved by the said way of purgation.

ing: After which I put him into a strong Decoction of *Sarsa*, and sweat him with *antimon. diaphoret. &c.* purging him with *pil. cochiae min.* and *præcipitat. alb.* every fourth Day, by which Course I confirmed his Cure.

A young Fellow, whom I had cured of a Chancre between the *Glans* and Prepuce, and was putting into a Course of Diet-drink and Sweating, pretended some extraordinary Business for two or three Days, in which time he came to me with an Inflammation and Excoration of the *Penis*, with a small Ulceration on the Top of the *Glans*, and would have imputed it to my not having well cured him: But its Recency, with the Inflammation, demonstrated sufficiently that it was a new Clap, and I was obliged to him that he came to me again for Cure. Others of his Mettle have not been so kind. I repeated Venæsection, and dressed him with the *decoct. plantag. summitat. rub. &c.* as it is set down in the Method of Cure, and purged him with *pil. ex duobus & calomel.* increasing and diminishing the one, and the other to avoid the making his Chaps sore: Then by a Course of Diet-drink, Sweating and Purgung finished the Cure.

One of about thirty six Years of Age came to me with the Prepuce inflamed and swelled over the *Glans*, the End of the Prepuce being carious, and contracted so close, that I could scarce get in my Probe. The *Glans* felt hard and unequal, and much feid Matter discharged from between it and the Prepuce, which certainly demonstrated Chancres and great Ulceration of some Continuance. He had also swelled Glandules in both his Groins. I fomented the Swelling with *decoct. malvae, tap. barbat. sem. lini, fænugræci, &c.* and injected the vulnerary Decoction with *Unguent. Ægyptiac.* and put in a short Tent of *rad. gentian.* dip'd in *oleo lilior.* into the contracted Prepuce, with Directions that he should put in a fresh one so often as he should urine, or syringe himself; to which purpose he had many prepared bigger and lesser. That Day I let him blood, and directed a Clyster, and purged him the next Morning with *pil. cochiae min. & merc. dul.* and repeated the said Physick, according to his Strength, proportioning the *merc. dul.* so as to avoid salivating. By this Method, and

and by his Course of Diet, with Sudorificks, the Ulcers healed, and the Carnosity resolved; but the Entrance into the Prepuce continuing narrow, I passed in a Pair of Probe-scissors as high over the *Glans* as the narrow Entrance would admit; then pulling back the exterior Tunicle, I cut the inner straitened Coat, till I had so enlarged it, that it turned back. That done, I applied my Restrictives upon the Wound, and rolled them on, leaving the *Glans* only covered with the Circumvolutions of the Roller. The third Day after, I dressed it again, and saw the Wound digesting, and healed in some Parts; I dressed it with the *digest. ex terebinth. cum vitello ovi*, and applied a folded Linen, dip'd in *albumine ovi* over it, and rolled it as before. I afterwards cured the Wound with *unguent. tutiae*, and then permitted the Prepuce to return to its Place. In this Case I have sometimes made two or three Stitches at equal Distance, by which the Lips have been sooner united. In those where the Prepuce is not retained back, the Wound cureth, and leaves the Prepuce deformed and troublesome in Coition, upon which Account I circumcised one lately that came out of other Hands. You ought to be careful in the dressing Ulcerations between the *Glans* and Prepuce; for it sometimes happeneth, that they grow together; yea, in such Case, the very Entrance into the *Urethra* will contract extream narrow, and sometimes close up.

11. Observa-

tion. A poor Gentleman, supposing his Difficulty in urinating proceeded from the Stone, silently endured it till the Urine was in a manner suppressed: Then I was fetch'd, and saw the Prepuce stretched over the *Glans*, and the Entrance into it carious, and scarce wide enough to admit of a Probe. I made a Dilatation by a small Pair of Plyers, then passed in a Probe, but could neither get into the *Urethra*, nor pass considerably between the *Glans* and Prepuce. The Work required Dispatch, therefore having drawn out the interior Tunicle, and thrust backward the external one, I caused my Servant to make a Ligature upon the Prepuce, close by the End of the *Glans*, and with a Knife cut off the hard carious End of the Prepuce. I thought to have turned it back, but found the interior Coat of the Prepuce firmly grown to the *Glans* round, as if it had been

one Body, and the Entrance into the *Urethra* almost quite closed up by a hard *Cicatrix*. I brought the incised Lips of the Coats of the Prepuce together, and retained them so round by a few Stitches; then having wiped away the Blood with a Spunge, I made an Apertio through the *Cicatrix*, enlarging the Entrance of the *Urethra*, and gave way for his Urine; then put in a piece of a searching Candle to keep the Passage open. I dressed up the Prepuce with *Pul. Galeni* upon Pledgers of Lint dip'd in *albumine ovi*, and brought a Fold of Linen over it, leaving a Passage for Urine. That Afternoon I took out the wax Candle, and put it in a leaden Pipe, which was easily retained for Discharge of Urine, and the while cicatrized the Apertio there. The Wound in the Prepuce being digested and cicatrizing, I cut out the Stitches. This Person piss'd out seventeen Pipes in few Days after. Infants are sometimes born without this Apertio, in which case if it be not speedily made, the Urine makes its way through some Part of the *Ductus*, or the Infant dieth miserably.

A young Blade was commended out of the Country 12. Observation to a Physician here, who committed him to my Care. The Prepuce was swelled and inflamed; between it and the *Glans* there were many Chancres, as I supposed, by the Hardness I felt, and by the Discharge of fetid Matter, and from thence I judged the Inflammation and Swelling in the Prepuce to arise. The Glandules in both his Groins were swelled. To have waited for Suppuration in these, had certainly caused the Putrefaction of the other diseased Part, it being then in great Danger through the so long concealing of it. Wherefore I began with fomenting and syringing of it with the decoct. plantag. summitat. rubi, &c. with an Addition of 3j. *Ægyptiac.* to six Ounces of the Decoction, and continued the Dressing of him with that twice a Day. The Physician prescribed him a Clyster that Night, and the next Morning we let him blood in the Arm, and purged him the Day after with extract. rudii & calomel. and the next Day repeated a Clyster. The Day after he was purged again with extract. rudii & 3i. calomel. After this manner he was treated from the sixteenth of August to the fifteenth of September following, he drinking a decoct. sarsæ upon a sudorifick *Bolus* those Mornings

ings he did not purge; and from the third Day of his purging he made that Decoction his constant Drink, unless it was those Mornings while he was purging, and then he drank a thin Broth. By this Method the Glandules in his Groins resolved, and the Chancres cured; the Callosity also on the *Glans* and End of the Prepuce resolved, and became naturally lax as before. Then we kept him strictly to his Diet-drink, and sweat him in a Wicker Chair with *Antimon. diaphoret. gum. guaiaci* and a warm Draught of his Decoction, and purged him every fourth Day with an *infus. senæ*, &c. and so proceeded to the fourth of October. Those Days he sweat he dined upon a roasted Partridge, and at Night was allowed Biskets and Raisins of the Sun; and when he purged he dined upon boiled Meat, and drank small Ale. During the whole Course he kept his Chamber, and by so doing was perfectly cured, without making his Chaps sore in the least.

13. Observation of Inflammation and Chancre in Pudendo. A young Woman was put into my Hands, having a great Inflammation and Swelling in *Pudendo*, with a large round Chancre between the *ductus urinarius*, and the Interiors of the *vagina uteri*, with great Excoriation of the Parts without. I let her blood, and the next Day purged her with an *infus. senæ* in a *decoct. cassiae* and *tamarind.* with *syr. de spina cervina*, &c. and sent her the while a Pint of the *decoct. plantag. summitat.* &c. to stupe and syringe the diseased Part, which we continued the use of till she was cured. The Day after her purging, I gave her twelve Grains of *turbith. min.* which vomited her often, and purged her thrice. That Afternoon a Clyster of Milk and Sugar was administered, and the next Day she took another Clyster. The Flux continuing on the Parts, I gave her gr. viij. *turb. min.* with *conf. ros. rub.* in the Form of a Pill; it vomited her more moderately. A Clyster was again administered that Evening. The next Morning I found her more easy. I then purged her with the former *infus. senæ* the two following Days, by which I prevented the Swelling of her Chaps. During this the Excoriation dried, and the Chancre was disposed to cure. From that time I purged her with the Extract set down in the Method of Cure, adding to each Dose 9j. more or less of *præcipitat. albus*, by which Method she was cured in few Days.

Days. I then put her into a strict Course of Diet and Sweating, and thereby confirm'd the Cure. I shall forbear giving many Instances of this Sex, in consideration that there is little Difference in the Cure, only these are more subject to Fluxion, and so require more powerful Revulsion; and that your Topicks be more drying, lest Excrescences arise upon the excoriated Part.

A Man, aged about thirty eight Years, of a pletho-
tick Body, came to me with the Prepuce contracted
close over the *Glans*; it was carious and hard, especi-
ally on the right Side, under which Part I supposed
there lay a Chancre. I concluded it venereal, but he
not acknowledging it, I prescribed him *pil. coch. min. 3j.*
calomel. 9j. to take at twice, intermitting a Day between,
but let him blood in the Arm first. The foresaid
Pills working agreeably with him, he was supplied with
more of them, and drank a *decott. sarsæ* between while,
and took his desired Liberty of walking abroad. By
this Method he sensibly perceived the Callosity resolve, and
was satisfied that I could cure him if he pleased, but was
thereby rendered the more secure and careless in taking
that prescribed Physick; so that after the Space of three
Weeks, when he came to me again, he had many Scabs
on his Head, *Herpes* on his Face, and other sort about
his Thighs and Arms, and the Callosity not much lessened
on the *Penis*; at Sight whereof I prevailed with him
to let me know his Lodging, which being at last granted,
I sent him twelve Grains of *turbith. min.* and purged
it off that Afternoon with a Draught off Sir *Alex. Fra-*
sier's potus amarus. I repeated the *turbith* once in three
Days, and gave him the bitter Decoction between.
Thus I dried the Ulcers, and they shell'd soon off: The
Callosity also resolved easily, and the Prepuce relaxed
and turned back; yet some *callus* remained a longer
time upon the inner Tunicle of the Prepuce; but by
Diet-drink, Sudorificks, and repeating the Vomit or
purgative Pill once in four Days, he was in six Weeks
perfectly cured.

Now lest you may think I am too strict in giving so
many Internals in the Cure of so small an Ulcer as a
Chancre, or rather a Chancrous *callus*. I shall give you one
Instance, and the only one that I ever fail'd in the
Cure of. It was in the Year 1654. an Apothecary,
since

14. Obser-
vation of
Chancre,
with Car-
nosity of
the Prepuce.

15. Obser-
vation of
Callosity.

since deceased, engaged a Physician and my self in the Cure. The Chancre was of the Bigness of a Cherry-stone, seated on the Neck of the *Glans*; the Physician prescribed *pil. ruddi & mer. dul.* to be given every other Day, and a *decoct. sarsæ, &c.* as it is usually made with its additional Ingredients. Those Mornings he did not purge, he was to take $\vartheta j.$ *antimon. diaphoret.* *in coch. I.* *syr. limon.* He having thus prescribed a Method of Cure, the Apothecary prosecuted the Course, and indeed there was little for me to do; but the Patient desiring my daily Attendance, I dressed him with a Pledge dip'd in *lac sublimat.* a Medicament not inferior to any in such a Case. The first fourteen Days we passed on very secure, not doubting Success, but from that time observing the *Callus* not to resolve, as I expected, I began to enquire into the Patient's manner or Diet, and into the Physick he took. As to his Diet, he lodged in the Apothecary's House, who kept a good Table, his Drink was *decoct. sarsæ*, but so small, as it was little better than Water. But to that I was answered, it was the second Decoction. I then enquired for the first, which he shewed me in a four Ounce Glass in the Window, and told me the Patient drank three of those in a Day, *tribus horis medic.* I was surprised at this new way, and did not wonder at my small Success. I thought it not reasonable to take notice of it to the Patient, but spake to the Apothecary to forbear the giving the second Decoction, and to make the first proportionably, as it was by the Physician prescribed, and to repeat the Purgative oftner. In this latter I prevailed, but the former he justify'd, and continued that Method to the last. By the frequent Purging, and the Application of a Cerote made with the Solution of crude Mercury *in aq. fortis*, that *Callus* Chancre resolved, after we had spent near six Weeks time; I then put the Patient upon Sweating, and advised a more strict Diet, but before the Patient had spent full out a Fortnight, he grew weary of the Course, and concluding himself well, broke off: but he relapsed soon after; whereas if he had been briskly purged, and afterwards kept to a strict Diet, and a strong Decoction of *Sarsa*, and Sweat, he might have been perfectly cured in a Month, without any Application to the Callosity.

In strong Constitutions the Malignity of this Disease is sometimes discharged by a *Bubo* in the Groin, in which Case it ought to be drawn outward by Cupping-glasses, and brought to Suppuration. Yet where it is not very forward (and is accompanied with Chancre, or other virulent Ulcers, as in one of the preceding Observations) I do not attend its Suppuration, but proceed in the Cure with Antivenereals, as I have there shewed you; but where there is only a *Bubo*, I proceed as followeth.

One about forty Years of Age, of a strong sanguine Complexion came to me with a swelled Glandule in his right Groin; it was of the Bigness of an Almond in its Shell, somewhat painful, but without Heat. I supposing it Venereal, applied a Cupping-glass to it, and afterwards an Emplaster of *Pic. Burgund. saponis nigr. axungiae porcinæ, & aceti, an. part. æqual.* granted the Patient Liberty of Diet, by which, within three or four Days, the Tumour fixed and grew bigger, and heated the Skin, and by the Continuance of that Application, it encreased with Inflammation and much Pain. I then applied this suppurative Cataplasm: Rx *Rad. liliæ. albor. cepar. sub ciner. coctar. an. 3iv. far. tritic. 3ij. axung. porci, anseris, an. 3jss. croci pulver. 3j.* The Tumour encreasing, and not growing soft, I added to the same Cataplasm *ferment. vet. 3ij. pulpæ ficuum extract. in sp. vini*, by which it afterwards suppurred. I opened it in the declining Part by Incision, and discharged a slimy crude Matter, I dressed it with *unguent. basilic.* upon a Tent, and afterwards added *merc. præcipitat.* Whilst I deterged the Ulcer, I let him blood, and purged him with an *infus. senæ* three or four days; but after the first Days purging, I gave him *3j. calomel.* over Night, and the Infusion the following Morning. During the time it was cicatrizing, I purged him with *pil. coch. min. & calomel.* every third Day. The other Days he drank a decoct. *sarsie,* and after the Ulcer was cicatrized, I gave him a few Sweats, and concluded the Cure.

A young Man came to me, having a *Bubo* in his right Groin. I applied an Emplaster of *Galbanum*, spread upon Leather, and continued it there some Days, giving him the Liberty of Diet. In a short time it suppibrated; I opened it by Caustick, and discharged a slimy Matter.

Matter. I dressed it up with Lenients to hasten Separation of the *Eschar*, and applied an Emplaster *de mucilag.* with *emp. melilot.* After the *Eschar* digested off, I deterged with *mund. Paracels.* purged him with *extract. rudii & calomel.* every other Day, and prescribed a *decoct. sarsæ, lig. guaiaci, &c.* which he drank those intermitting Days. After the Ulcer was cicatrized I sweat him, keeping him that while to a stricter Diet, by which Method he was secured from relapsing.

18. Observation of
a Bubo.

A Man about thirty four Years old, of a full Body, came to London, and lodged himself and Wife in the House of his Physician, he being indisposed with an Inflammation on his Belly to the left Groin, pretending he had over-heated his Body by Disorder in Drinking. He was advised to keep his Bed, and dispose himself to a breathing Sweat. After a Day or two he complained more of his Pain, upon which Account I visited him, and saw the Inflammation discussed on his Belly, but there remained a Tumour in his Groin near suppurated. A Cataplasm was applied to it *ex rad. lilio.* &c. by which it suppurated a few Days after, and I opened it by a Caustick, and gave vent to a crude finous Matter. Whilst I attended the Digestion of this, the Patient took an Opportunity to shew me some small Chancres upon the *Penis* near the *Frænum.* I dressed them, and gave him a Solution of *mel. Egypiac.* in *decoct. plantag.* &c. to cure them.

The Abscess not digesting nor yielding to Detersives, I acquainted the Physician that I had discovered the Disease venereal, and implored his Help. He purged the Patient with *pil. rudii, mer. dul.* and prescribed him *decoct. sarsæ, &c.* by which the Ulcers in *Pene* were cured, and the Abscess grew well disposed to heal. But upon the Physician's and my discoursing with the Patient of his Disease, he grew passionate, and denied it to be venereal; and a Day or two after removed out of his Lodgings two or three Miles into the Country; and to avoid the Discovery of his Disease, he dismiss'd me, and entertained another Chirurgeon, who complied, and promised in few Days to cure him, without the Help of internal Remedies; But after all his Endeavours, another Chirurgeon was consulted, by whose Advice the Patient was put into a Course of Antivenereals at last, and

and cured of that, but grew otherwise diseased, and lived not many Years.

A young Man was brought to my House, of a ple- 19. *Observation of* thorick Body, diseased with a hard compacted Swelling *vation of* in his left Groin; it was a *Bubo*, and like to suppurate, *Bubo*. I applied an *emp. diachyl. cum gum.* About a Week or ten Days after he came to me again; it was then suppurrated: I opened it, and having discharged the Matter, dressed it with *unguent. basilic.* upon a Tent, and applied over it some of the aforesaid Plaister, and dismissed him and his Apothecary, with Directions how to proceed. After two Months I was fetch'd to this Patient, and saw that *Bubo* terminated in a phagedenous Ulcer about three Inches in Length, and proportionably broad, with indented callous Lips. The Ulcer it self was sordid, and had corroded round under those Lips; he had also on the *Scrotum* four large round Ulcers, and others like them in *perineo*. It was my Wonder to see this Disease so rage, considering the Course I had prescribed was the same I had cured so many by; and he had taken so much *merc. dul.* that it was grown familiar to him, and seemed to encrease the Virulence in the Ulcers. I began the Work with cutting off the jagged Lips, and filled the Ulcer with Pledgits spread with *unguent. basilic.* dip'd in Precipitate, and dressed the other Ulcers after the same manner with *empl. diachalcith.* to retain them on. I did not let him blood, because I had permitted those callous Lips to bleed freely, but I directed a Clyster to be administred that Afternoon. I purged him the next Day, and two or three after, with a *decoct. amar.* of Sir Alex. Fraiser's, and then gave him *gr. xvij. Turbith mineral.* in a Pill made up with *cons. ros. rub.* which vomited him well, and purged him twice. That Afternoon a Clyster was given him of fat Broth *cum vitello ovi.* After the first Application of *merc. precipitat.* I dressed the Ulcer *inguine* with *unguent. basilic.* and *merc. precipitat.* mixed. The other I dressed with Pledgits pressed out of *lac sublimat.* By the repeating of the *Turbith. min.* once in four or five Days, I disposed the Ulcers to heal, and by Clysters and purging Draughts between while I prevented Salivating.

After the Ulcers in the *scrotum* and *perineum* were cicatrized, I put him into a strict Diet, and kept him to

the drinking of decoct. *sarsæ*, &c. with good Sudorificks, and by purging him once in four days, he was happily cured, and continues so to this Day.

20. Observation of Bubones, Chancres, and Pains in the Shoulders. Two young Lads, intimate Companions, came out of the Country alike clap'd by one and the same Wench; they having both failed of their Cure there, were commended to my Care. They had both Swellings in their left Groins, and Callosities about the *Glans*, remaining from preceding Chancres. They were also afflicted with *verrucae* and *mariscæ in podice*, and Pains in their Shoulders. These Swelling in their Groins were without Pain or Inflammation, so not like to come to Suppuration. Therefore, without more ado, I let them both blood, and purged them two or three Days with Sir *Alex. Erasier's potus amarus*, then gave them each a Dose of *Turbith Mineral*. which vomited them well, and took off their Pains. The next Day I snip'd off the *mariscæ* and *verrucae*, rubbing their remaining Roots with the caustick Stone; and having cleansed them, I dressed them up with Lenients, and after Separation of the Eschars cicatrized them with the Vitriol Stone and *unguent. epulotic.* During the Cure of these, I repeated the *Turbith min.* once in four or five Days, and between while carried down the Matter by Clysters and lenient Purgatives, by which Method I resolved the Callosities and the Glands. Then I put them into a *decoct. sarsæ*, with Sudorificks, and with *extract. rudii* and *calomel.* every fourth day finished their Cure.

21. Observation of Heat, Pustulæ, &c. A Physician and my self were fetch'd to a Man, whom we found in Bed. He was not sick, but broken out all over his Body with Heat. The Physician advised him to dispose himself to a breathing Sweat upon a Draught of warm Posset-drink, wherein was boiled *ras. corn. cerv. &c.* A Cordial Julep was also prescribed as is usual in Ebullition of the *serum sanguinis*. Three or four Days after I visited him again, and found that Heat raised into many Pustules, which had also overspread his Head, and terminated there in as many ulcerous Scabs amongst his Hair. These were visible Symptoms of the *Lues*, and appeared so to me at the second Visit I made him; but he did not acknowledge it till some few Days after, and then he shewed me some corrosive Ulcers on the *Penis* near the *Frenum*, and some *verruce in perineo*, yet denied

denied that it was an Infection of a late Date. He was contented we should proceed in the Cure, to which Purpose he was let blood, and the next Day purged with an infused Potion. After which he purged him with *calomel*, &c. proportionably as his Strength would bear, avoiding the making his Chaps sore. By this Method the Ulcers dried, and the Scabs shew'd off, the Ulcers on the *Penis* were dressed and cured as hath been shewed in the preceding Chapters. We then prescribed him *decoct. sarsæ*, &c. with *antimon. diaphoret. bezoard. min.* &c. and some few Days he sweat; but he supposing himself cured, brake off from our Method; whence it came to pass, that the Malignity shew'd it self in different Forms. Sometimes in an *ophthalmia* threatening his Eye-sight, in which Case he consulted Oculists and others, but, after all, was cured by us with the forementioned Purgations. After that, he was afflicted with a fierce Catarrh, in the Cure of which he ran long Courses of Pectorals, but was only relieved by us with Antivenereals. But not prosecuting that Method of Cure, he was some Months after grieved with a Cholick, which lasted a long time, and a *bernia humoralis* attended that, upon which Considerations he at last submitted to a more strict Method, and was freed of his Cholicks and other Symptoms, by purging with Catharticks mix'd with *calomel*. The Course was finished with *decoct. sarsæ*, drying Diet and Sweating.

A Woman, aged twenty seven Years, being quick 22. *Obser.* with Child, was broken out in her Head and Face, and *vation of* several Parts of her Body with *serpigo* and various *pu-* a *Woman* *pustulæ* and Scabs. I let her blood, and the next Day *with Child* purged her with an Infusion of *sena, rhab. &c.* to which *venereal.* was added *manna* and *syr. ros. solut.* and from that time. I prescribed her *praecipitat. albus* from 15 gr. to 25 every other Night, or proportionably, to avoid salivating of her. But I not having the Liberty of visiting her as I ought, it swelled her Chaps and she fluxed 18 or 20 Days, and was thereby freed of her *pustulæ*, &c. In the Declination of the Flux I purged her with a *decoct. senæ, polypodii, hermodact. sem. carthami, &c.* made in a quantity of Diet-Drink, which she drank thrice a Day, and took the while a medicated Broth for her Nourishment. After her Chaps were cured, I put her into a *decoct.*

sarsæ, and a drying Diet, and sweat her moderately with *antimon. diaphoret. gum. guaiaci* and *bezoard. occident. cum cons. melissæ*, and *fjr. limon. in forma boli*, purging her between while with the forementioned Apozeme, and cured her. She afterwards went out her full Time, and was delivered of a sound Child: I made it a Fontanel in the Neck. It died of Convulsions in the Country at three quarters of a Year old.

23. Observation of another Woman with Child. A Woman big with Child having many ulcerous Scabs on her Head and other Parts of her Body, with great Erosion, I let her Blood, and prescribed her a decoct. *sarsæ*, with some of the milder Purgatives, *senæ. polypod. hermodact. rhab.* &c. and afterwards prescribed her a few Doses, viz. *gj. calomel.* every other Night, till I had checked the Malignity; then prescribed her this: Rx *Bezoard. miner. gfs. gum. guaiaci gr. xv. antimon. diaphoret. gr. viij. cons. borag. q. s. f. bolus.* After which she drank a Draught of decoct. *sarsæ*, and sweat moderately. By this way of proceeding her Disease was palliated, and she went out her full Time, and was brought to-bed; but the Child died convulsive within three Weeks. After which the Mother was removed to more convenient Lodgings, and cured as hath been said in the former Observation.

24. Observation of a Nurse infected. A Nurse, by giving suck to a diseased Child, was infected with great Ulceration and Chops, with *verrucæ* on the Nipples and Parts about the Breasts, upon which Account the Child was taken from her, it being suspected she had infected the Child. She had also a Node upon her Right Hand, and some Breakings-out upon her Limbs. I enquiring into the Cause, saw this poor Woman's Child, which was born within the Year, very well complexioned and sound. I caused her to be let Blood, and purged her with *pil. cochiae & merc. dulc.* three or four times, intermitting a Day or two between; then vomited her with *Turbith mineral.* and repeated it once in four or five Days. To the Ulcers and Ulcerations I only apply'd a little *unguent. diapon:pholyg.* spread thin upon Linen, to prevent their fretting and sticking to her Shift, for they cured by the internal Remedies. But the Nodes not resolving, I raised a Salivation by the *Turb. min.* and afterwards confirm'd the Cure by purging, dry Diet, decoct. *sarsæ, lig. guaiaci, &c.* with Sudorificks.

I was

I was sent for to a Child that was broken out all over the Body with some branny and matterly Scabs, the Disturbance whereof had extreamly emaciated the Infant. The Mother was also diseased in the same Manner, and big with Child; I prescribed her a purging Apozeme, and gave her *præcipitatus albus* every other Night the first Week, and afterwards prescribed her a medicated Ale with *sarsa, china, lig. guaiaci*, &c. for her constant Drink, and gave her many Days *Æthiops mineral.* 3*ij.* at a time, and kept her Body soluble between while with a lenitive Bolus.

I purged the Infant with *syr. de Rhab.* and afterwards with *calomel.* from gr. iv. to gr. vi. either in the Pap of a roasted Apple, or a Spoonful of Milk, proportionably as I saw he could bear it, it purged him twice or thrice, and some time vomited him. His Grewel and Pap were made with a Decoction of *sarsa, china*, &c. by these Remedies I dried the matterly Scabs, and the Infant was in a great degree freed of his Itch. I also caused him to be bathed in a Tub of warm Water seven or eight Days. In the declining of his Itch a *Phyma* arose near the *podex*, which being suppurated, I opened by a Caus-tick, and ordered the dressing of it daily with *unguent. basilic.* spread upon Linen. This discharged Matter plentifully for the Space of a Month, and then it lessened and cured. During this Method of Cure, the Infant grew, and recovered Strength; but upon the Omission of the Mercurials, new Eruptions appeared, which were removed by *Æthiops mineral.* and moderate purging; but it died since. His Mother, by continuing the prescribed Method, was cured, and was in due time brought to bed of a healthful Child, and both the Mother and Child continue well to this Day.

A Woman who suspected herself Venereal was brought to bed of a seeming healthful Child; it thrived very well for some Months, and the Skin was clear, yet it had a Fontanel made in the Neck for Caution. This Infant being about four Months old, brake out in the Head, afterwards in the Face, and most Parts of the Body, with such Eruptions as shewed it to be Venereal, yet the Mother seemed untainted. I proceeded with this Infant by purging it with the Infusion of *Rhabarb.* and between while with *præcipitat. albus*, which some-

25. Observation of
an Infant.

26. Observation.

time vomited him, and gave him a Stool or two. It relieved him much, and disposed the Scabs to dry. I prescribed him medicated Grewels, and a decoct. *sarsæ, ras. C.C. eboris, &c.* for his Drink; also *Bezoard. miner.* to take sometime, by which he recover'd of his Distemper, but died afterwards of the Small-pox.

By the same Method I cured a Girl of two Years old, that was broken out of her Body with *Pustulæ* and matterly Scabs, and had a *marisca juxta podicem*, which I have always observ'd to be a certain Symptom of the Lues.

27 Observ-
ation of a
Herpes
exedens
in the Face. One newly come out of a Course of Physick, shewed me a small dry Scab on one Side of his Neck, and enquir'd of me whether I thought he was cured. I return'd a favourable Answer, not being willing to engage in the Cure of a Disease which he supposed himself so well of, but gave him a little *Pomatum* to dress that Scab. Some while after other Symptoms arising, he put himself into other Hands, who treated him for the space of eight Weeks, and dismissed him cured; and upon that Assurance he married, but within few Days a new *pustula* thrust out and ulcerated. He writ to me to send him somewhat to palliate it till he should be at more liberty to put himself into a Course of Physick. I sent him a Box of *pil. Rudii* with *calomel.* and an Unguent to dress the Ulcer; but he not taking the Pills, the Ulcer terminated in a *herpes exedens*, and at last he sent for me. He had a Callosity on one Side of the *glans* as big as a small Kidney Bean; he had also some small round corrosive Ulcers about the *Fraenum*, and was troubled with a Noise in his Ears and Deafness. I undertook his Cure, and began with a Clyster, then let him Blood, and purged him the Day after with an *infus. senæ, &c.* the next Morning I gave him 35 Grains of *præcipitat. alb.* in a *Bolus* with *cons. borraginis*, and that Afternoon a Clyster: To the Ulcer and Callosity in *glande* I only applied Pledgets dipt in a Solution of *mel. Ægyptiacum* in some of the *decoct. plantag. equiseti, &c.* The *herpes exedens* lay round and hard in the Skin, and was crusted over with a thick Scab, which I loosened by bathing it with a *decoct. malvæ, &c.* The Scab being taken off, the Ulcer appeared sordid and corroded round, and the Lips were high and *callosus*. When these happen in the Thighs or other Parts which

which are not so visible, I do not concern myself in the dressing them otherwise than to defend them from adhering to their Linen, till they be dried by Internals. But in this Place I was obliged to remove the callous Lips and the several Excrescences in the Ulcer, to render the Cicatrix smooth. To which Purpose I rub'd them with the Caustick-stone, and wasted and dried the *hypersarcosis* by the Application of red Precipitate, and afterwards by the Use of the Vitirol-stone and Epuloticks I cicatrized the Ulcer so even, as at this present there are no Marks of it. During the Work I purged him often with *præcipitat. alb. & pil. coch. min.* and sometimes vomited him with *turbith mineral.* by which I also resolved the Callosity, and cured those little Ulcers near the *frænum.* After I had thus freed him of those Maladies which affected the Skin, I put him into a *decoct. sarsæ, &c.* with the Observance of a strict Diet, and sweat him often with a *Mercurius diaphoret.* and purged him once in four or five Days, by which he was also freed of that *tinnitus aurium,* and restored to a perfect Health.

A Man aged about forty Years, of a gross Body and 28. *Observation of disorderly Life,* frequently consulting Men of our Profession, but never observing any strict Method of Cure, *sweetning* came one Day to advise with me about his Disease, *the Blood.* which was a dry Scurf with an Itch on several Parts of his Body, as also some wandering Pains on the *scapulæ, &c.* Amongst other Discourse he told me an eminent Man in the Cure of the *Lues venerea,* had offered to cure him by sweetning of his Blood, without giving one Grain of *Mercury.* I did not believe his Blood would be the better, yet if he thought so, he might proceed in that Course, and when he should be let blood I desired he would send for me. He did so, and I let him blood according to the Directions ten Ounces: It was of good Colour and Consistence. About six Weeks after, when he had finished his Course of Phyfick, he sent to me again. I let him blood about the same Quantity as before. His Blood was like some of that our Physicians call Pleuritical, it had neither Colour nor Consistence; yet I thought not the worse of it, (so he was cured) for upon a Return to his wonted Diet the Blood would recover its former Colour: But he relapsed some

some Weeks after, and I let him blood again, and it was as at first of good Colour and Consistence. He was well pleased to see his Blood look better, but was so much dissatisfy'd with his late Treatment, that he would not again be persuaded into a strict Course of Physick, yet I undertook the Cure, and purged him frequently with *pillulae ex duobus* and *calomel*, and sometimes gave him the latter alone: He also drank a Decoction of *Sarsa*, &c. but with these he went abroad, and thereby prolonged his Cure, yet at last that Malignity was also spent.

29. Observatio- *n* A Man of about thirty Years of Age having several *Herpes* and serpigenous Ulcers on his Thighs and about his Body, with nocturnal Pains in his Head and other Parts, also a large Ulcer on the Middle of his Tongue, I let him blood, and the next Day purged him with the bitter Drink. The Morning after I gave him a Dose of *Turbith min.* and the third Day after repeated it again, designing to salivate him; upon which Account I repeated the *Turbith* five times. He had taken much *Mercury*, and only slavered with it, but the while he was freed of all the Symptoms save that of his Tongue, and that seethed inclinable to heal. Therefore I purged off the *Mercury* with the bitter Decoction for several Days, till I had run him very low. Then I put him in a strict Course of Diet, with *decoct. sarsæ*, &c. sweating and purging him the Space of sixteen Days, during which the Ulcer in his Tongue cured. I designed Bathing and a more nourishing Diet, but his Affairs abroad hastened him away. He was longer in recruiting his Flesh than was usual; but, by a Milk Diet he recovered it, and hath from that time continued well.

30. Observatio- *n* A Country Lad was taken notice of by some of his Fellow-servants in the House where he lived, to have a Ulcers on *Uvula*, *Nose*; he told them it was scratch'd in playing with a Kitten; but in Progress of Time the Inflammation Tonsils and Swelling increasing very much, he was brought to me one Afternoon, and persisted in the same Story. I hearing them say it was occasioned by a Scratch, did not much mind it; but so soon as I heard him speak, I took notice of his Hoarseness, and took him to the Window, where, looking into his Mouth, I saw the Tonsils ulcerated, and the *Uvula* black with the Mortification, and Part of it separating. His Nose was also stuff'd with crusty

crusty Ulcers. I questioned him privately how long it was since he had a Gonorrhœa or Chancr, and who cured them? He confidently denied he ever had any; however the *Lues* was visible, and required a speedy Remedy. He was presently let blood, and I gave him two Papers of *mer. dul.* 9j. in a Paper, with Directions to take the one at Night in a Spoonful of Bread and Milk, and the other in the Morning, and two Hours after to drink Posset-drink with an Ounce and a half of Manna dissolved in it. I directed the dressing of the *Uvula* and those Ulcers of the Tonsils with *Aqua divina Fernelii* daily, till my internal Prescriptions disposed them to a healing Condition. To which Purpose I repeated the *merc. dul.* with some of the Purgatives between while, and in the Space of ten Days cured those Ulcers in his Throat. His Nose was syringed with *decoct. bordei*, by which the crusty Matter which stop'd his Nostrils, was removed. Then we syringed with some of the *Errhina* set down in the Method of Cure. After the Ulcers in his Throat were digested, I hastened the Exfoliations of the Bones in his Nose by the giving him two or three Doses of *Turbith*, which made a light Salivation. Towards the Declination of it I purged him with the bitter Decoction, and by Diet-drink, strict Diet, Sweating, &c. finished his Cure.

Coming one Day to put him out of his Course of Physick, I saw the Edges of one of his Nostrils sore, which I supposed a new Eruption: it surprised me to see it so soon break out again. I was angry with the Nurse, suspecting there had been some Neglect in the Prosecution of his Course of Physick; but the Nurse replied he had made his Nose sore by picking of it. For a farther Trial I advised the Patient to forbear so doing, and to keep his Chamber a while longer; he did so, and three or four Days after I visited him again, and saw that Nostril well, and was satisfied that he had pick'd it. I advised him to be more careful of his Health, and dismiss'd him.

One of about twenty Years of Age came to me with his Head overspread with crusty Ulcers; also some serpiginous Ulcers about his Body, and a Node upon the Back of his Hand, with a Gumminess on the Tendons reaching to his Fingers, insomuch as he could not bend

*31. Obser-
vation of
Pustulæ,
and a Node
on the Back
of the Hand.
one*

one of them.. In endeavouring his Cure, heretofore he had run long Courses of Physick, and was much emaciated thereby. I began with the fomenting and embrocating his Hand with Discutients, and applied the mercurial Empl. set down in the Method of Cure, and purged him with *Diagridium*, *bezoard. mineral. calomel. in cons. ros. damasc.* and the Night after gave him an Opiate *Bolus* with one Grain of *Laudan*. Thus I proceeded according as his Strength would admit, and prescribed him *decoct. sarsæ*, and medicated Broths, by which I dried and shelled the ulcerous Scabs, and eased his Pains. After I found his Strength recovered, I gave him ten Grains of *Turbith*, and observing that he bare it well, I repeated it a second and third time, and thereby salivated him about seventeen or eighteen Days; all which time I nourished him with the aforesaid Broths and Posset. During the Salivation, the Gumminess resolved, and the Node diminished much. As the Salivation declined, I again prescribed him the *decoct. sarsæ*, and purged him with the bitter Apozeme; then by a strict Diet, Sweating and Purging, the Node resolved, and his Hand was restored to its former State, and I dismissed him perfectly cured.

32. Observ. One of about forty Years of Age, having a *Herpes exedens* on his right Brow, a *Marisca in Podice*, and some *Herpes ex-Verrucæ* about the *Glans*; also some wandering Pains edens ver- on his Shoulders; I let him blood, and purged him tucæ, &c. with the Cathartick Electuary, and *Mer. dul.* three or four Days; and dressed the *Herpes* as hath been shewed in some of the preceding Cases. And after his Purgings I cut off the *Marisca* close with a Pair of Scissors, and rub'd the remaining Root with a Caustick Stone, then dress'd it up with Lenients, by which it was digested, and afterwards cicatrized it by the Help of the Vitriol-Stone, and the common Epuloticks. Whilst this was digesting, I vomited him with *Turbith mineral.* repeating it once in three Days, and increased the Dose from twelve to eighteen Grains, till I had dried the *Herpes*, and the Crust shell'd off: During this, I cut and burn'd off the *Verrucæ*, as hath been said in the like Cases. These being also cured, I purged him with the bitter Decoction four or five Days, then with *decoct. sarsæ*, and that Sudorifick of *Bezoard. min. gum. guaiaci*, &c.

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I sweat him, and kept him to a strict Diet, purging him once in three or four Days. His Pains remitted after his taking the first Dose of *Turbith*, and by this latter Course his Cure was confirmed.

A Nurse was brought to me, who, by giving suck to 33. *Observation of Herpes in the Breast,* &c. a diseased Infant, had the Nipple and Parts about her right-breast, very much excoriated, and four round hard crusty Ulcers somewhat more distant: She had a Node, with Pains on her right Leg, also a *Serpigo* on her right Hand and Fingers. She had not been troubled with a *Gonorrhœa*, nor was the *Pudendum* ever diseased, which confirmed to me that she had gotten the Infection by sucking the Child. I began her Cure with letting blood, and purged her with the purging Extract and *Calomel*, and after I had repeated it three or four times, and given her some *Calomel* alone at distant times. I vomited her with *Turbith min.* and repeated it three Days after, and thereby her Chaps swelled, and she salivated eighteen or twenty Days; during which, Clysters of Milk, with the Yolk of an Egg, were often administered, and her Mouth frequently wash'd with *Decoct. hordei*, &c. Before she had salivated six Days, her Node and Pains removed. As the Salivation declined, she was purged with the bitter Decoction, and her Cure was finished by *decoct. sarsæ*, &c. as hath been shewed in the former Observations.

A Man about thirty Years of Age, of a full Body, 34. *Observation of Herpes,* diseased with matterly Scabs about his Head, many *Pustules* and serpiginous Ulcers on his Thighs and several Parts of his Body, put himself into my Hands. I let &c. him blood, and that Afternoon I prescribed him a Clyster, and the Morning after purged him with *pulv. cornichin.* and the next Morning early he took *præcipit. alb.* gr. xxv. and a Clyster that Afternoon. The Day after I purged him with *pulv. cornich. Æij. præcipit. albi* Æj. and the next two Mornings gave him *Æthiop. mineral.* Æj. in a *Bolus* with *cons. cort. citri*, and a Draught of *decoct. sarsæ*, &c. after it to dispose him to a breathing Sweat. The third Day I gave him *Turbith min.* gr. xv. which vomited him often, and purged him twice, and in the Afternoon gripe him, and put him upon a *Tenesmus*; to remedy which a Clyster of Milk, *cum vitello ovi & ol. chamæmel.* was administered, and Chicken Broth and warm

warm Posset-drink was his Drink that Day and the next. The Day following I gave *præcipitati albi* 9ls. & *Turbith. mineral.* gr. vii. in a *Bolus*, which vomited him thrice. That Afternoon a Clyster was repeated, and the Day after he was purged with an infused Potion of *Sena, rhabarb.* &c. and repeated the *Æthiops mineralis* and *decoct. sarsæ* as before, three Mornings together. Then I gave him *Turbith* gr. xv. as at first, which vomited him often, and from that time the Ulcers dried, and, in the worst of them, the Scabs were ready to shell off. I then purged him with the bitter Decoction four or five Days, and kept him strictly to the *decoct. sarsæ*, drying Diet and Sweating, with *Æthiops mineral.* and purged him once in four Days with *pulv. cornichini*, and *præcipit. alb.* and so concluded his Cure in seven Weeks.

35. Observation of Herpes and serpig. Ulcers.

A young Fellow sorely diseased with *Herpes* and fretting Ulcers from his right Hip and Buttock down that Thigh, having used many Remedies externally and internally, I applied a Cloth, spread with *unguent. enulat.* over the ulcerous Parts to defend them from sticking to his Shirt, and let him blood that Day, and purged him the next with an Infusion of *Sena*, &c. and the Day after gave him *Turbith mineral.* gr. xij. The Day after I purged him with *pulv. cornichin.* and *præcipit. alb.* and repeated it every other Day, by which his Ulcers soon dried, and the Scabs shelled off. His Skin growing smooth, he concluded himself cured, and left me; but in less than a Month he relapsed and came to me again. I repeated Bleeding, and purged him with an Infusion of *Sena*, &c. and afterwards gave him three or four Doses of *Turbith mineral.* it made his Chaps a little sore, and somewhat he flattered. This freed him of his serpiginous Ulcers. Then I purged him with the bitter Decoction, and sweat him with *decoct. sarsæ*, &c. purging him once in three or four Days with Antivenereals, and at last dismissed him cured.

36. Observation of Herpes ex- edens. A Man of a full Body, having been long afflicted with ulcerous Scabs, Serpigo, and other Foulnesses of the Skin arising sometime in one Part of his Body, and sometime in another (his Chirurgeon being dead) was recommended to my Care. The Ulcer that then troubled him was on his Chin, the Compass of a broad Shilling, and covered with a thick Scab. It seemed to

me

me to be Venereal, but I was told otherwise, and durst not dispute it. I thought my self very unhappy in being put upon the Cure of such an Ulcer, without the Help of Antivenereals. I fomented it with *decoct. bord. summittat. althææ, malvæ, & sem. lini*, and applied a Pledgit of *unguent. rosar.* over it, with Bandage to retain it on. The next Morning the Scab came off, and there appeared a sordid Ulcer, with ragged callous Lips round it, also many Excrescencies rising up in the middle, which made the Ulcer not unlike a Honey-comb, as I have elsewhere described it. I sprinkled the Ulcer with red Precipitate, and applied over it small Dossils of dry Lint, and some Pledgits spread with *unguent. tutiæ Vig.* over them, and repeated this way of Dressing every other Day, till I saw the Flesh in those little Cells ruddy. Then I dressed them with little Pellets of Lint, and covered the Excrescencies with Precipitate, and bound up the Ulcer as before, not opening it again till the third Day. Thus I wasted them, and the Ulcer cicatrized here and there as they were consumed. I was glad to see it cicatrize any way, and resolved, without more Delay, to remove the callous Lips. To which Purpose, at the next Dressing, I rub'd them with a Caustick-stone, and clip'd off the Sloughs, then sprinkled them with Precipitate, and, after Separation of those Sloughs, I rubbed the Lips with the Vitriol-stone, and by the one and other I smooth'd the Ulcer, and at last cicatrized it with Pledgits dip'd in *lac virgin.* but the Cicatrix appearing unequal, I rubbed the remaining Eminences again with a little Caustick, and left it at last cicatrized more smooth to the Patient's Satisfaction. I was glad I had preserved my Credit with him. But it being venereal, I suspected that it would shew it self again in the same Place; but it appeared in a Node upon his Skin, as you may read in some of the following Observations.

A Man of about thirty two Years of Age, of a strong Constitution, came to me upon a Supposition of having *variorum of the King's-evil.* His Face was over-spread with *Herpes exedens*, some of them crusted high, with dry Scabs upon his Nostrils and Lips; his Head was covered over as it were with one Scab, and in truth his whole Body so diseased with eating Ulcers, that he could neither sit all the Body nor *dy.*

nor lie without very great Pain; his Shirt, Drawers and Stockings being stiff with the Matter that flowed from them. Upon Enquiry into the Original of his Malady, I discovered that he had contracted a *Gonorrhœa* beyond Sea, and had been diseased with *Pustulae*, &c. above half a Year. I prescribed him a Clyster that Evening, let him blood the next Morning in the Arm about ten Ounces, gave him *Calomel* 3j. that Night going to Bed, and purged it off in the Morning with an Infusion of *Sena, Rhab.* &c. The next Morning he took *Turbith min.* gr. xii. and drank a Draught of Posset-drink after it, which vomited him three or four times, and purged him much. This poor Man's Condition being extream uneasy, obliged me to prosecute the drying up those Ulcers with what Expedition I could; wherefore I gave him *Calomel* and *Turbith* the oftner, and purged it downward with the bitter Drink, either the same Day or the next, according as his Strength would bear, till I saw the several Ulcers dried, and the Scabs shell'd off. Then I left the Use of the Purging Drink, and increased the Dose of *Turbith min.* till I saw him salivate; which Salivation lasted about eighteen or twenty Days. In the Declination thereof I purged him again with the fore-mentioned Decoction, and finished the Course of Physick with *decoct. sarsæ*, Sudorifick, Sweating, and drying Diet, &c. according to my usual Method. During which I rub'd off the several remaining Excrencences (arising from the Ulcers) with Caustick-stones, and cicatrized them with the Vitriol-stone, *unguent. desiccative. rub.* &c. and dismissed him cured.

38. Observation of Herpes serpigin. &c.

One came to me having an *Herpes exedens* on his Chin, and many Eruptions about his Body, with wandring Pains on his Shoulders, Arms and Legs. He desired to be cured, but would not be confined to his Chamber. I declining to meddle with him upon those Terms, he put himself into the Hands of an Empirick whom he had formerly known in *Italy*. He undertook the Cure with great Promises. But after the taking that Empirick's Prescriptions a much longer time than he had undertaken to cure him in, the Symptoms remaining, the Patient grew peevish; and the Empirick to recover his Credit with him, alter'd his Method, by which it seemed the Ulcers cured. But in the while his Chaps fw elled,

swelled, and in taking cold a *Diarrhoea* with a *Tenesmus*, followed, and with much Disorder he was brought to a Lodging near me.

I caused him to be put into a warm Bed, and prescribed him a *Bolus sudorifick*, and, with a Draught of warm Posset, put him into a Sweat, and some Hours after advised a Milk Clyster, *cum vitel. ovor. &c.* to lenify his Bowels, and laid him to Rest with *elect. diacord.* and the next Morning I purged him with an Infusion of *Senna*, *Rhabarb.*, &c. and repeating the Opiate, by which the griping of his Guts was remitted. But in this while the Swelling in his Chaps was sunk, and he complained of a Noise and Pain in his Ears, and tho' his Mouth was very sore, yet did he not spit. I much suspecting how I should cure him without salivating, gave him *arcanum corallinum* gr. iv. by which he vomited often, and thereby I raised the Swelling in his Chaps, and he fluxed near three Weeks; all which time I kept him to warm Posset-drink and Cordials, and administered Clysters as Occasion offered them. As the Flux declined, I purged him with the bitter Decoction, and by a drying Diet, Sweating, &c. I cured him.

One aged about twenty six Years, having Breakings out in his Head, right Brow, and several Parts of his Body, with Pains on his Shoulders and Legs, I let him bleed, and the next Day purged him with a cathartick Potion. Then, in Consideration he had failed of his Cure in other Hands through his Irregularity, I caused the Unction to be applied for some Days, but he not salivating well thereby, I gave him *Its Turbit mineral.* and raised it higher, and continued it between three Weeks and a Month, during which his Pains ceased, and his Skin became clean. In the declining of the Flux I purged him with the bitter Drink, and put him into Diet Drink, Sweating, &c. and designed to finish his Course by Bathing; but he supposing this latter Course needless, broke off unknown to me. About two Months after he was brought to me more diseased, and upon Enquiry into the Cause I found he had taken too great a Liberty of eating and drinking during his Cure. To avoid which Inconvenience now, I lodged him in a House where there was a more strict Guard of him; then repeated Venæsection and purged him again

with the bitter Apozeme seven or eight Days, and gave *Calomel* every other Night during his Purging; then prescribed him a Dose of *Turbith min.* gr. xv. and repeated the *Turbith min.* so often as I might conveniently do without fluxing him. After I had thus freed him of all those Symptoms, I put him in a more strict Diet, and by Diet-drink, and sweating him with *gum. guaiaci*, &c. also purging him once in three or four Days, I secured him from Relapse, and concluded the Course by Bathing him.

40. Observation of an Ophthalmia. A Man, aged about fifty Years, of a seeming healthful Constitution, having been long subject to Inflammations in his Eyes, had tried ineffectually the several Endeavours of Oculists and others by various *Collyria*, Purging, Bleeding, Blistering, Shaving the Head, Fontaines, &c. at length he consulted me, relating to me the Manner of his Life, and the various Remedies he had taken. I suspected the Distemper in his Eyes arose from some Relict of the *Lues Venerea*; upon which Surmise I readily undertook his Cure. I began it with the washing his Eyes with a Solution of *troc. albi rhas.* *in aq. ros. rubr.* and applied *emplast. ad Herniam* on his Temples. The next Day I let him blood, and prescribed him a Clyster. The Morning after purged him with *pil. Rudii & mer. dul.* and disposed him to Rest that following Night with an anodyne Draught. The Morning after I gave him *bezoard. min. gr. xv. gum. guaiaci gr. viij. in coch. cum syr. limon.* and a Draught of *decoct. sarsæ; lig. lentis. cum flor. anthos, euphrag.* &c. as is set down in the Method of Cure, to dispose him to a breathing Sweat, and advised the Drinking the fore-said Decoction daily, excepting when he purged, which was every fourth Day. By this Method his Eyes were cured in the Space of ten Days, but he prosecuted the Method longer.

41. Observation of an Ophthalmia. A young Fellow grievously afflicted with an Inflammation of both his Eyes, with *Pustulæ* and Ulcers in the *tunica cornea & adnata*, also Blearedness of the Lids, he was returned from the Oculist as incurable; upon which Account I was desired by his Friends to employ my Endeavours in the taking off the Fluxion, and to dispose his Eyes to some Ease, they concluding his Sight lost. I let him blood at that Instant, and purged him the

the next Day with an *infus. senæ, &c.* He was of a strong Constitution, and seemed to require such Evacuation. The Evening after his Purging I made him a *Seton*, and brought a Fomentation to give a Breathing to the impacted Humours, with which I fomented his Eyes. I also drop'd a Collyrium into them of *aq. chelidon. mirabilis, &c.* as it is prescribed in the Treatise de *Strumis*. While I was one Day dressing his *Seton* and Eyes, I questioned him, whether he ever had a *Gonorrhœa*? he denied it faintly. I urged him farther, and look'd upon his *Penis*, and saw a hard *Callus*, the Remains of a Chancre. Upon Sight of this I purged him with *pul. cornicchini* and *merc. dulcis*, and repeated it often, and thereby took off the Fluxion, and disposed his Ulcers to cure; and afterwards, by *Turbith min.* vomited him once a Week. Between while I prescribed him *decoc. sarsæ, with bezoard. mineral. gum. guaiaci, &c.* and regulated his Diet accordingly. By this Method I cured his Eyes, and he gradually recovered his Sight to walk about the Streets, and of late Years can write and read.

A poor Fellow came to me diseased with a *Fistula 42. Obser- lachrymalis*, which at first Sight seemed by its callous *uation of Lips* to be cancerated, but being informed that he had heretofore been clap'd, I readily undertook his Cure, and began with letting him blood, and purged him with *pil. cochiae min. & calomel*. During his Purging I deterged the Ulcer, and disposed it to cure, by removing the chancrous Lips, and made way to the Bone, which being carious I dried with an actually Cautery, and from that time dressed it as hath been shewn in those Observations of *Fistula lachrymalis* in the said Chapter de *Strumis*, and compleated the Cure by Antivenereals, as in the preceding Observation hath been prescribed, and dismissed him perfectly well.

One about twenty eight Years of Age had been here- 43. Obser- tofore afflicted with an Absciss on the Outside of his *uation of a right Leg*, which not yielding to the common Endeavours of Chirurgery by laying open, Digestion, &c. I na on the was fetch'd, and seeing the Ulcer of a great Length, Leg. the Lips of it jagged and callous, I cut them off, and dress'd the Ulcer with the common Digestive, and sprinkled the Ulcer it self (which was fordid) with *merc. præcipit.* and Pledgits of dry Lint, an *empl. e bolo* over

over it, with a Compress wrung out of red Wine, and rolled it up. Having thus dress'd up the Ulcer, I enquired into the Original of the Distemper, suspecting it to have risen from some malign Fever, or the Relicts of some ill cured Clap. But the Patient denying that he ever had either of them, I endeavoured to inform my self of the Method prescribed by those under whose Hands he had been, and discovered that he had taken *mer. dulcis, antimon. diaphoret.* and Decoctions of *Sarsa, &c.* which Method I again repeated, and proceeded in digesting of the Ulcer some Days, and put on a laced Stocking, but I could not make good Digestion in three Days. I considering the evil Quality of the Ulcer, and the Manner of Life the Patient had formerly led, concluded the Disease certainly venereal, and that the *mer. dul. &c.* prescribed him was not of sufficient Force to quell such a Malignity. For daily Practice sheweth that *mer. dul.* given once in two or three Days will not check the lesser Species of the *Lues*; and where it is not powerful to cure, it maketh the Erosion greater, and the Disease becometh more invertebrate. Upon which Considerations, without farther Enquiry into the Disease, I attempted the Cure by Anti-venereals, and gave him twelve Grains of *Turbith min.* in a *Bolus* with *conf. boraginis*; it vomited him four or five times, and purged him twice, and put him upon a *Tenesmus*, which I took off that Afternoon by a Clyster of Milk with the Yolk of an Egg, and endeavoured to excuse the churlish Working of the Medicament. The next Day I saw the good Effects of the Physick in digesting of the Ulcer, and resolved to prosecute the Method, or quit the Patient. I dressed up the Ulcer with *urguent. basilic. cum præcipitat.* Emplaster and Bandage, designing to effect this Cure by Internals; to which Purpose I repeated a Clyster that Day and the next, and the fourth Day gave him sixteen Grains of *Turbith min.* in a Pill, which wrought as the former, and directed a Clyster again in the Afternoon. That Night he spit much, and in the following Morning complained of a Soreness of his Chaps; but I not observing him likely to flux, purged him the Day after with *Manna* in a Draught of Posset-drink, supposing I should make a greater Revulsion by vomiting him twice or thrice,

thrice, than by raising a slight Salivation; but he growing impatient with the Soreness of his Mouth, I changed that Resolution, and gave him eighteen Grains of *Turbith*, and thereby fluxed him nineteen or twenty Days. In the Declination of it, I prescribed him a Decoction of *Sarsa*, and purged him with an Apozeme made in some of the same Decoction. During the Salivation the Ulcer cicatrized by the Application of the above-mentioned Epuloticks, and I finished the Cure by drying Diet and Sudorificks. After which he removed into the Country, and by a Milk Diet recovered his Strength, and his Leg became useful to him; but he continued the Wearing his laced Stocking some time longer. When these Ulcers are treated as scorbatical the Patient dieth tabid.

One of about forty Years of Age, having been long troubled with a *Herpes miliaris*, which had spread it self on the Soal of one of his Feet, came to me for Cure. He had taken *mer. dul. antimon. diaphoret. &c.* Medicines proper enough to cure the milder Species of the *Lues Venerea*; but the Patient being irregular, and not acknowledging it venereal, failed of his Cure: At the first Sight of the Ulcers I concluded them venereal, and resolved to proceed with him by such a Method, or leave him to seek his Cure elsewhere; and began by purging him with *pil. Rudii, & mer. dul.* and afterwards prescribed him a few Pills of *Æthiops mineralis cum Terebinth.* One of which he took every Morning, drinking a Draught of a medicated Ale after it. After he had taken six of these Pills, I began with the Cure of the Ulcers, dressing them with the *Fotus* and Liniment set down in the Cure of *Herpes*; but that not answering my Expectation, I wash'd the Ulcers and Parts about them with warm Milk, then having cleansed and dried them, I rubbed the Lips of them all with a Caustick-stone, till I had eradicated and smoothed them fit for to cicatrize, and then wash'd out the lixivial Salt, to prevent its farther Penetration. From that time I dressed them up with *Merc. præcipitat.* and put on a laced Sock. The third or fourth Dressing the Sloughs crumbled off, and the Ulcers appeared well cicatrized. But within few Days they all brake out again. At the Sight of which I concluded the Ulcers venereal, and prevailed with

44. Observation of a Herpes miliaris in planta pedis.

him to take *Mercury*, and began with 3j. *Calomel*. and the next Day gave him a Dose of *Theriac metallor.* and repeated it two or three Days, I designing that way to cure these Ulcers. But the *Theriaca* not moving him by Stool or Vomit, he wrangled with me, supposing I could not cure him but by such Medicaments as worked one of those ways, whereas we know by Experience, that *Mercury* frequently cureth those Ulcers, by altering the Quality of the Humours; but I complied with his Desire, and gave him a Dose of *Turbith gr. xij.* in a Pill that vomited him five or six times, and purged him twice or thrice. The next Morning he complained of the Soreness of his Mouth. I advised him to drink warm Posset-drink, and to take a Clyster, but he did neither. I being engaged in the Cure, thought it best to hasten a Salivation, before he should be aware of it, and gave him two Doses more of the *Turbith*, increasing each Dose two Grains. These made his Chaps forer, and would have fluxed him, but he being ungovernable, it caused a *Tenesmus*, and ran down in a *Diarrhoea* with a large Evacuation, and terminated in a Dysentery. Upon the Sight hereof, I would have prescribed him such Remedy as is usual in those Cases, but he was so impatient at the Accident, as to admit of no Excuse from me, nor any of my Prescriptions. Indeed the *Herpes* was dried, and he had an eminent Physician his Friend, who relieved him by his Prescriptions, and restored him to Health soon after, and could as easily have then prevented the Relapse; but the Patient being well, concluded he should continue so, and brake off abruptly from him, without any Observation of Diet-drink, Sweating, &c. and became so good natured as to make me a Visit in Acknowledgment of his Cure. But about a Month after he sent for me, complaining of an Itching he felt in the Soal of his Foot, he supposed from his too much walking the Day before; I looked upon it and saw a Heat rising in the Skin. I believed it a Return of the Disease, but having resolved not farther to engage my self in the Cure, I left him with a favourable Construction of it. The next News I heard of him, was, that one pretending to Chirurgery had undertaken the Cure of it, by bathing it with a Decoction of *Broom*, and boasted so confidently of the Cure, as if he

he had already performed it, calling them a few Kibes. But whilst he was picking of these out, the Patient shewed me a Swelling upon the Shin-bone, and desired my Judgment of it. It was a very well-grown Node, and I guessed by the Patient's thin Chaps that it was no small Disturbance to his Rest; however it was a Confirmation of the Quality of his Disease, and might serve to alarm him to provide for his Cure. I was then taking a Journey into the West-country, and at my Return was informed that he died under some Empirick's Hand in his Course of Physick.

One of about forty Years of Age, having *Herpes ex- 45. Obser-*
edens very large on several Parts of his Body, came to *vation of*
me much emaciated thereby, he having been many *many Her-*
Years afflicted with them. He had also some Nodes *pes exc-*
lately risen on his Legs. I purged him with decoct. Epi-
dens and *thymi*, and afterwards gave him *præcipitat. albus* 3j. to
twenty five Grains daily, and wash'd the several Ulcers
with *lac virginis*, and dressed them up with Pledgits dip'd
in the same, to dry them, till I could by Internals cure
them. But in few Days I perceived this Patient had
been so accustomed to the taking Mercurials, as the
præcipitatus albus was of no Force, therefore I forbore
the longer Use of it, and gave him ten Grains of *Tur-*
bith mineral.; it vomited and purged him moderately.
The next Day I saw the Ulcers drying, and from that
time dressed them only so as to defend them from stick-
ing to his Linen; the third Day I repeated the *Turbith*,
and the fourth Day after gave him another Dose, and be-
tween while Clysters were administred, and sometimes
we purged him with *Manna* in a Draught or two of
Posset-drink. Thus the Ulcers were cured, and the
Scabs shelled off. I then purged him with the bitter
Decoction four or five Days, and confined him to a
drying Diet and *decoct. sarsæ*, sweating him for some
time with Diaphoreticks; but he, finding himself well,
brake off from this Course before he had been four-
teen Days in it, which occasion'd some little Eruptions;
but by the taking of a few Grains of *Theriac. metallor.*
with our purging Extract, and sometimes *Bezoard. min.*
with a Decoction of *Sarsa*, they were dried up, and in
Progress of Time the Malignity was wasted, without
keeping of his House.

46. Observation of Ulcers in the Arm and Leg, with Caries.

One of about forty-five Years of Age, of a lean dry Body, had an Ulcer on the out-side of the *Biceps* on the Left Arm, which upon Search with a Probe I discover'd to be carious. He had also three distinct Ulcers on the *os Tibiae* of the Right Leg, a little above the Ankle, which were also carious. That on the Arm took its original from a Node, as the other on the Leg did from a *Gumma*. They had been some Years ulcerated, and I suppose the Malignity discharged itself there, for other Symptoms of the *Lues* he had none at that time. I began with the Cure of these Ulcers by the Application of Causticks to remove the external *Callus*, and make way to the Bones. That in the Arm lay deep, and required Deterion and Dilatation, which was the Work of some Weeks; but the others on the *os Tibiae* lay superficial; and as the Eschars separated in some of them, Bits of Bones came away with them. Where any remained intangled in loose Flesh, I sprinkled that Flesh with Precipitate daily, and with that and the Vitriol-stone made way for the taking out the remaining Bones, and with much Ease cicatrized those Ulcers, the Exfoliation of these from the main Bone having indeed been made to my Hand by the Strength of Nature, and required no more from me than the making them way to come forth. But that *Caries* in the Bone of the Arm lay slab'd in Matter, and was not so easily come to; and when it was, it did not yield to the ordinary Application. Therefore, after I had some time kept it unsuccessfully dilated, I pass'd a *Canula* in, and by an Actual Cautery dried the *Caries*, and from that time dressed it dry with Dossils pressed out of *spir. vini*, and waited its Exfoliation. And to hasten the Work, I began to purge him with an *infus. senae*, &c. and afterwards with *Calomel*, which I repeated often in a lenitive Bolus, and put him to the drinking a Decoction of *sarsa*, &c. and with Sudorificks sweat him: But after some Days observing the Bone did not exfoliate, I gave him two or three Doses of *Turbith*, and made a Revulsion thereby. From that time the Ulcer dried, and an Exfoliation was made of some small rotten Bits of Bones, and the *Callus* which thrust them off united with the muscular Flesh, and the Ulcer incarned as I diminished my Dossils, and cicatrized soon after.

after. The Ulcers being cured thus, I concluded the Course of Physick by Purging, Diet, and Sweating.

One about thirty Years of Age, of a gross Body, having been much pained on his Right Leg, with a great Node upon the Shin, put himself into the Hands of an Empirick for Cure; who after a long Course of Purging, ^{47. Observation of a} *Node laid open, with* Sweating, &c. failing in his Cure, employed me to lay *the Consequence.* it open. I obeyed, and having encompassed the Tumour within a Line, I applied the white Caustick. The next Day I found the Tumour sunk; but the Caustick had penetrated to the Bone, according to the Length and Breadth that was designed. I cut the Eschar round, and raised it with the *Periosteum*, and saw the Bone sound, and naturally white and smooth. I dressed it with Pledgets dipt in *liniment. Arcei* warm, and the remaining Eschar with *unguent. basilic.* to hasten its Separation. After some few Days the Eschar separated, but the Ulcer grew painful and inflamed, and would not digest; upon which Consideration I enquired into the internal Prescriptions, and finding them not of sufficient Force, I prevailed to give a few Grains of *Turbitum minerale*, and thereby made a Revulsion. From that time I digested the Ulcer with that common Digestive *ex Terebinth.* &c. and cured it as an Ulcer with *Caries*; during which the Malignity was eradicated by Antivenereals.

I am not against the applying of Medicaments to further the resolving of Nodes, but the laying them open till they have made their way by Apostemation, seems to me unreasonable, it being not only painful but also a Prolonger of the Cure. For supposing you do remove the Node and cure the Ulcer, yet unless you do eradicate the Malignity, other Nodes will arise. Whereas if Antivenereals be rightly administer'd, you may resolve the Nodes by them at the same time. I once saw a very large Node upon the *os Frontis* resolved merely by a Course of Diet-drink, Purging and Sweating. Sir Fr. Prujean was the Physician, and Mr. Pearce the Apothecary attended the Patient for his Master Laxton, as I suppose. The Course was long, and more strict than our Patients will now endure; but by Mercurials we do more certainly resolve them, and in a less time.

48. Observations of Ozæna, Ulcer in the Palate, Nodes, &c. One of about forty Years of Age, of a strong Constitution, afflicted with Nodes in his Arms and Legs, an Ozæna, Ulcer in the Palate, in both which the Bones were carious, had been eight Weeks in Physick under the Hands of an Empirick, and being at a loss, consulted me. They shewed me some Instruments they had devised to hook out the Bones; they also shewed me some little Bits of Bones which they had broken off from the whole. I admired the Ignorance of the Empirick to glory in such Work; but am since satisfied that a confidence in prating is a sufficient Basis to build a Practice upon amongst some kind of People. As to his Instruments, they were well enough contrived to pull out Bones; but it would have been more for his Credit to have designed some way to have kept them in. For in some of those Places the least Diminution of a Bone caufeth a Deformity; and in others, as those of the Palate, there will want a supply of *Callus*, and so consequently it would not only spoil his drinking, but his Voice. Upon which Consideration those Instruments were laid aside, and *errhina* were prescribed, as in the Method of Cure hath been shewed, of which he snuft up or injected some into his Nostrils often in a Day. In order to his Cure I resolved to salivate him by Uncition; to which Purpose I let him blood, and purged him with a lenitive Bolus, and afterwards bathed him three or four times; then caused him to be anointed, and thereby raised the Salivation; all which time I had regard to the washing his Chaps and keeping up his Strength. About the 24th Day the Salivation declining, I purged him with the bitter Decoction, and then put him into a *decoct. sarsæ*, &c. and sweat him, proportioning his Diet drying according as his Mouth healed. During the time of his salivating, the Ulcers in his Nose cured, and so did that in his Palate, but the Bones they had pull'd away left the Marks; yet that in the Palate was supplied by a small Plate which was retain'd by a Sponge. Some of his Nodes discuss'd during his Salivation, and the other in the time of Sweating. He being thus cured, we ended our Course of Physick with bathing.

One of about twenty-eight Years old being grievously afflicted with a Catarrh, having used many Remedies unsuccessfully, a Seton was advised to be made in his Neck. I being sent for to make it, found the Patient in Bed, so emaciated as it was impossible he should continue it there without great Pain. I desiring some way to be useful to him, enquired into the Quality of his Disease, and looking into his Throat, saw the Tonsils extreamly ulcerated, the *Uvula* and that Part of the Palate eaten away. I concluded it Venereal, and before I stirred from him, discovered it was the Effect of a Chancr ill cured.

I took leave of him, and acquainted those that sent me of the Nature of his Catarrh. They having satisfied themselves of the Truth, put him into my Hands. There was no great matter of Credit to be gotten in endeavouring a Cure, where the Patient should be left to snuffle all the Days of his Life; but I obey'd them, and prescribed him that Night *ðj. mer. precipitat. albus* in a Spoonful of white Bread and Milk. I directed the washing his Throat with one of the Gargles set down in the Method of Cure, and dressed them daily with *lac sublimat.* prescribing him a *decoct. sarsæ* to be drank with a third part of Milk, at the least thrice a Day. I repeated the *præcipitatus albus* Morning or Evening, also a Clyster some time to keep his Body soluble. By this Method I cured these Ulcers in the Space of three Weeks. Soon after, as he recovered his Strength, I left off the use of the Milk, and prosecuted the Course by a strict Diet, *decoct. sarsæ*, Diaphoreticks, &c. then fitted his Palate with a Plate of Silver, which he could put up and take out at pleasure: It formed his Voice, and served to lead the Drink its right way. Some Months after I saw him fat and well, and he assured me that the ulcerated Parts were so contracted together that he had no farther use of the artificial Palate.

A Woman of about twenty-eight Years of Age having been some while vexed with the lesser Species of this Disease, put herself under some hands for Cure; but during that Method she complained of a Soreness in her Throat, which increasing, she consulted others, and afterwards others, but unsuccessfully. (I suppose from her own Irregularity.) Some Months being passed, her Friends

49. Obser-
vat. of the
Uvula and
Palate eat-
en away.

50. Obser-
vat. of
Ulcers in
the Tonsils,
Palate, &c.
with a
Node on
her Leg.

Friends recommended her to me. Both her Tonsils were much ulcerated ; there was also an Ulcer upon the back part of her Palate and *Uvula*. She had also a Node upon her Right Leg, and wandering Pains ; also a *fluor albus*. I prescribed her a Lotion, as in the former Observation, and dressed the Ulcers with *lac sublimat*. I let her blood, and directed her a Clyster that Night, and the next Morning 3j. *calomel*. I repeated this latter daily, she drinking a Draught of *decoct. sarsæ* after it, disposing herself to a breathing Sweat, and once in four Days was purged with an *infus. senæ*, &c. Thus I dried those Ulcers, but by the frequent repeating the *Calomel*, her Chaps grew sore, and she salivated, which I was not troubled at, her Node requiring it. Upon which Consideration I gave her 12 Grains of *Turbith minerale*, and raised it higher ; and some Days after, when I saw the Salivation decline and the Node unsolved, I applied a Mercurial Emplaster the whole Length of that Leg, and thereby continued the Salivation longer, till that resolved the Node. That done, I purged her with the bitter Decoction, and put her into a strict Course of Diet-drink, and sweat her. After her Mouth was cured, looking into her Throat I saw the Right Tonsil cicatrized, but there remained unequal Lips, which were troublesome to her. I also felt with my Probe a *Sinus* running downward ; it was made by a Coalition of the flapping Lips : I suspecting these might cause some Fluxion, or at least such an Uneasiness as might beget in her a Suspition of Relapse, I laid open that *Sinus*, and cut off those Lips with the other *Cicatrices*, and by rubbing the Basis of the Ulcer with a Vitriol-stone, cicatrized it afterwards smooth, and dismissed her cured.

51. Observation of Relapse with Nodes, &c.

A Woman of about twenty-eight Years of Age, much emaciated, was brought to me broken out all over her Head, Face, and several Parts of her Body and Limbs. It began with a virulent *Gonorrhœa*, the Cause whereof not being discovered, it continued long upon her, and after some Months was accompanied with a Pain in her Head ; for Remedy whereof she consulted her Physician, but she being herself ignorant of the Cause, could not inform him, and consequently suffer'd very long under it : But after these Eruptions the *Gonorrhœa* stopped, and

and the Pain in her Head ceased. What these Breakings-out were she had been lately informed, and desired my Help. I let her blood, and purged her with *decoct. senæ Gereonis*, and by a few Doses of *præcipitat. alb.* and a purging Diet-drink, I dried up these *Pustulæ* and Ulcers, and designed then a *decoct. sarsæ* with Sudorificks; but she believing herself cured, retired to her own House. Within half a Year after she came to me again, afflicted with Pains in her Head, and Nodes on her Shins, and Ulcers in her Tonsils. I let her blood and advised a Clyster, and dressed the Ulcers in the Tonsils as hath been said in the like Case, and prescribed her *calomel* ʒj. in ʒij. *diascord.* and purged her the next Morning with a Solution of *Manna* in Posset-drink. After I had by *calomel* somewhat digested those Ulcers, I raised a Salivation by Unction, which she bore very well, and was thereby freed of her Nodes. In the Declination of the Flux I purged her with the bitter Decoction five or six Days, then put her into a *decoct. sarsæ*, and afterwards by drying Diet, and Sweating, &c. the Pain in her Head went off, and the Ulcers of the Tonsils were (long before I dismissed her) well and perfectly cured.

A Woman aged about thirty Years, came out of the 52. *Observation of Country*, upon a Supposition of the King's-Evil. She had a hard Swelling encompassing the Muscle *Mastoïdes* on the Right Side of her Neck of a great Thickness. She complained also of a Soreness in her Throat, and of a stinking tough Flegm which she frequently hauked out, especially in the Mornings. I looked into her Throat, and saw an Inflammation upon the further part of the Palate and *Uvula*, but no Ulcer in the Tonsils. The Inflammation of the Palate gave me cause to suspect some latent Ulcer, and that her Disease was Venereal; but she denying it, I prescribed her a *decoct. hord.* with *syr. de ros.* & *diamoron*, also an *empl. de mucilag.* with *de ranis cum mercurio* to apply to the *Gumma*. Dr. *Lenthall*, who brought her to me, prescribed her an opening Apozeme, and to be let blood in the Country. Thus we dismissed her, but within few Days after she returned to us again, the Ulcer having seized upon the *Uvula* and spread itself to the Edges of the Palate. Upon sight thereof we disputed

puted not of her Disease, but considered of her Cure. She had of late Years been subject to great Discharges of the *Menstrua*, and was thereby rendered of a lax and weak Constitution, and her Body, having been so lately purged and bled, there required no other Preparation than of a warm Room, which was provided with all Expedition. For those Ulcers that arise on the interior Part of the Palate soon corrode their Way through, if the Alarm be not taken from the Inflammation that precedes, a little Mischief there being for the most Part irrecoverable. To prevent which, we gave her that Night 9j. of *Calomel*, and repeated it so often as we might conveniently do, and prescribed her a Decoction of *Sarsa* to drink with Milk. We also prescribed her some of the Lotions set down in the Method of Cure, some whereof we cast up with a Syringe into her Nostrils, and with other she gargled her Throat often in a Day. But the Cure of the Ulcer was compleated by frequent taking of *Merc. dulc.* The *Gumma* also lessened; but she having recovered some Measure of Strength, and her Chaps being already sore by the *Calomel* which she had taken, we gave her two Doses of *Turbith*, beginning with seven Grains, and so higher, by which we raised the Salivation, and thereby resolved the *Gumma*. In the declining of the Flux we purged her with an Apozeme, wherein was decocted *Sena*, *polypod. rhab. agaric. turbith, jalap, &c.* with the Addition of *syr. de spina cervina*. Then with drying Diet-drink, Sudorificks, &c. we finished the Course, and cured her.

53. Observation of an Ozæna. A young Man was commended to my Care, having an *Ozæna* in his Nose, affecting the *Septum* and *Alæ*; it seemed to be most on the right Side, with Inflammation and great Swelling. In undertaking the Cure of these Ulcers you ought to be cautious in delivering your Prognostick; for the Bones and Cartilages are soft, and covered with a thin Membrane, which being once corroded, corrupts quickly, and the least Defect in them leaveth a Blemish in that Part of the Nose. The external Inflammation is a shrewd Sign that the Ulcer is deep, and consequently that the Bones and Cartilages are carious: Therefore let not the Rectitude of the Part deceive you, for that may be supported by the Swelling and crusty Matter

Matter within, and upon the Removal of them the Nose or Sides of it frequently sink; and if any Deformity therein happen, while they are under your Cure, contrary to your Prediction, they will certainly impute it to your Neglect or Ignorance. In this Patient I suspected the right *Ala* from the external Inflammation, but promised my utmost Endeavours, and began my Work with injecting a Decoction *ex rad. althææ, jem. bord. cydonior.* and imbrocated the external Parts with *unguent. popul.* also applied a Cerote of the same; then let him blood, and directed a Clyster that Evening. After his first Sleep he took twenty five Grains of *Calomel.* in *conf. ros.* and was purged the Morning following with an Infusion of *Sena,* &c. afterwards I purged him with *Calomel.* and *Pil. Rudii*, till I had removed the Fluxion off his Nose. After the crusty Matter separated from within, I syringed and cleansed those Ulcers with one of the Decoctions set down in the Method of Cure. Having thus disposed his Nose to cure, I gave him a few Doses of *Turbith* and raised a Salivation, but the Ulcers cicatrized before he salivated, yet I flux'd him seventeen or eighteen Days. In the Declination of it I purged, and sweat him with *decoct. sarsæ*, and there appeared a small Bending inward of the right *Ala*, I suppose from the *Caries* had been in that Cartilage; it was thrust out to his own Satisfaction by a small Hoop made by a Bit of a searching Candle, painted of a Flesh-colour, but after some few Days he left that off, it not being worth the while.

One of a full Body, and strong Constitution, who had 54. *Observation of a* been long diseased with the several Species of the *Lues* *and a* *Venerea*, and been cured by me some Months before of *Node, and* *a Herpes exedens*, came now to us with a large Node of *Ulcers* upon his Shin of the right Leg. He was purged by his *in the Temp.* Physician, and prescribed a Decoction of *Sarsa,* &c. *sils.* also *Antimon. diaphoret.* Embrocations and Emplasters were applied the while to resolve the Node; but after six Weeks Course of Physick the Node remained almost as painful as before. Upon which Consideration it was concluded to lay it bare. I did lay it bare with the white Caustick, and divided the Eschar to the Bone, and at the next dressing raised the Eschar off, then rasped the Node off, and dressed it dry, as hath been set down

down in Ulcers with *Caries*. The Lips of the Ulcer I digested with *unguent. basilic.* applied warm, and afterwards incarned the Bone, and cured the Ulcer in the Space of two Months, not without great Pain to the Patient, and Trouble to me; whereas I might have resolved it, and eradicated the Malignity, and freed him of the *Lues* almost in half the time. Within one half Year he came to us again, not complaining of his Leg, but with Ulcers in both his Tonsils. These were certainly venereal, and I concluded they would be so acknowledged, and that I should have an easy Work of these. But the Patient would not be confined within Doors, nor admit of other Physick than a Decoction of *Sarsa*, and a few Powders of *Antimon. diaphoret.* Three Quarts of the foresaid Diet-drink were allowed him daily. I have sometimes seen him drink it up in a Morning as fast as if it had been *Tunbridge Waters*. I once enquiring the Reason, why he drank them in such Haste, he replied, he was to dine with some good Fellows, and that he did it to make way for better Liquor.

Thus he governed himself till the Ulceration increased, so that it was great Pain to swallow any Drink. He complained exceedingly to me that I could not at least palliate those Ulcers, whereas in truth I used my utmost Endeavours by all the Medicaments I could devise; but they spread, and were accompanied with such Defluxion, as at last, when he strove to drink, Part of it would gush out of his Nostrils. Upon which Consideration the Physician was fetched, and a Submission was promised to his Rules. The Cure was begun by a Clyster, bleeding and purging, with an infused Potion, and the Day after twenty five Grains of *Calomel* were given him in a Spoonful of white Bread and Milk, and repeated daily, or every other Day, Clysters or Purgatives being prescribed between while to carry the Matter downwards. By this Method his Ulcers were disposed to cure, and he finding his Throat easier, had Thoughts of dining abroad with his Friends. Upon Notice whereof I got leave of the Physician to give him fourteen Grains of *Turkith min.* which accordingly worked very well. I repeated it the next Day to sixteen Grains, it likewise vomited him; and made him spit, and his Chaps swelled: The next Day he perceiving that he fluxed, desired

sired the Physician would prescribe him Physick to purge it off, which was promised him; but a Day or two after the Flux not rising sufficiently, I brought him a *Bolus*, of a Mixture of *turb. min.* with *conf. borag.* which increased the Salivation. He sent for me, and offered me fifty Pound to take it off; but I assured him there was no Danger of his Life, and encouraged him to submit to it chearfully. He did so, and salivated eighteen or twenty Days as plentifully as I ever saw any. The Salivation declining, he was purged with an infused Potion, and Diet-drink was brought him, he promising us that he would keep his Chamber, and observe a strict Method in Diet, Sweating, &c. But he no sooner found his Chaps cured, but he returned to his wonted Liberty; and being told that he would most certainly relapse, if he did not prosecute the Course prescribed by his Physician: He replied laughing, It's thy Course, and not the Physician's, that he was very well, and if I would dine with him I should be a Witness of it. I took leave of him, and saw him no more in half a Year; and about that time he became more extreamly diseased: For it is most certain, that Mercurial Remedies serve only to dispose these Humours to be evacuated by Decoctions of *Sarsa*, &c. with Sweating. How he was at last perfectly cured you may see in some of the following Observations.

A Woman of about forty Years of Age, of a strong Constitution, having been long diseased with an *Ozæna*, ^{55. Obser-} was at length commended by Doctor *Bate* to the Cure _{an Ozæna.} of Doctor *Jasper Needham* and my self. The Matter had corrupted Part of the *Septum*, and other Bones within her Nose, and made its way externally between the Ridge-bone and Cartilages of the Nostrils, and fouled the said Bone to the very Brows. The Gristles being thus separated from the foresaid Bone, and having lost that Part of the *Septum* which should have been their Supporter, it sunk downwards, leaving such a Breach, that the Injections which we cast into her Nostrils with a Syringe spurted out there. After we had thus discovered the evil Quality of the Ulcer, we considered how to proceed in the Cure; and in regard of the Difficulty of the Cure, and the length of Time which might be required in the Exfoliation of these

Bones, we resolved without farther Dispute to salivate her by Unction. To which Purpose we let her blood, and purged her with an Infusion of *Senna*, &c. during which *Errhina* were prepared of a lenient Quality, such as have been proposed in the Method of Cure, to loosen the crusty Matter; and we enlarged the external Ulcer, along the Ridge-bone, as far as it was carious, in order to the Exfoliation of it. We digested those Lips, and dress'd the Bone dry, according to the Method set down in the Treatise of Ulcers with *Caries*. After we had, by *Errhina* and Lotions, cleansed the internal Ulcers of their Filth, we then proceeded by deteritive Injections, as prescribed in the Method of Cure, and put up a *Canula* in each Nostril, made of a Goose Quil, cover'd with a Bit of *empl. diachyl. simp.* spread on a soft Rag. These served to bear up the Cartilages of the Nostrils level with the End of the Bone (which before stood as it were looking over them) that they might be in a Capacity (if it was possible) to unite with it. While we were thus disposing the Ulcers to cure, we proceeded in the anointing her Legs and Arms, and thereby raised a Salivation, which continued upon her more than three Weeks. During that time the Ulcers cured within her Nose, and the Cartilages stood firm, and even to unite internally with the Bone, without the Use of the *Canula*; but the Bone there not being exfoliated, we continued the Salivation longer, by prescribing *Mercurius dulcis*, &c. and all that while we took care of her Mouth, that no Inconvenience should happen to her Jaws, &c. and kept up her Spirits with Broths, Posset-ale and Cordials. After we saw the Bones exfoliating, we purged her with an Apozeme, and prescribed *decoct. sarsa*, with Sudorificks to sweat her. During which the Bone exfoliated, and the Ulcers cured with a Cicatrix not unseemly. We then concluded our Course of Physick, leaving her more healthful and strong than she had been in many Years.

56. Observation of
Nodes,
Gumma,
and Ulcers
in Os Pa-
lati.

A Man, of about thirty six Years of Age, had a large Ulcer on the Roof of his Mouth, with a *Caries* on the *Os Palati*, also many Nodes, viz. a great one upon the left temporal Muscle reaching to that Brow; also two on his right Arm, one whereof was on the *Os Humeri*, and the other on the *Ulna*; one very large upon the Shin

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Shin of the right Leg, and another on the Outside of his Left, which latter was soft and inflamed, and was by some proposed to be opened, but it seem'd to me to be a *Gumma*. He had been long afflicted with the Disease, and was lately come out of a Salivation raised by *mer. dul.* in which he had spit very much. I touched the Ulcer with *Aqua divina* warm, and advised the dressing it twice a Day after the same Manner; to the inflamed *Gumma* I applied an *empl. e bolo* to prevent its apostemating. The rest of the Nodes I designed to scatter by a Salivation with Unction. To which Purpose I let him blood, and directed a Clyster, and the next Morning purged him with 9j. *Calomel.* in a lenitive *Bolus*; and to dispose him to Rest, I gave him some Nights 9j. *Calomel.* in 5j. *diascord.* whereby the Ulcer in his Palate was the better digested. Having thus prepared his Body for the Unction, I caused his Limbs to be anointed daily till his Chaps swell'd much; then I desisted, and advised Posset-drink, Broth, &c. to be always ready for him to drink, and keep up his Spirits. There was also Care taken to syringe and wash his Mouth. During his Salivation, the Ulcer in his Palate cast off a Scale of a Bone half an Inch at least in Length, and presently after cicatrized firmly; his Pain ceased, and the *Gumma* resolved, and all the Nodes diminish'd much, save that on his Shin; yet he did not spit a quarter so much in this Course as he said he had done in the former raised by *mer. dul.* I continued him in the Salivation about twenty Days, then purged him with the bitter Decoction five or six Days, and from that time kept him strictly to his Diet-drinks, and with Sudorificks sweat him, and proportioned his Diet more drying, accordingly as his Chaps healed, till I thought him cured; and then I gave him more Liberty to nourish his Body, and to drink the Decoction of *Sarsa* with Milk twice a Day, and bathed him four or five Days; and kept his Body soluble with a lenient Electuary. Thus I dismissed him, yet there remained somewhat of that Node on the Shin, but it being without Pain, I supposed it would resolve, as indeed it did within a Fortnight after, and he continued well.

53
Observation of
Nodes.

One of about thirty Years of Age, of a full Body, having been long afflicted with Nodes and excessive Pains on divers Parts, especially on his Head, put himself into my Hands for Cure. I designed a Salivation by Unction, to which Purpose I prepared his Body by a Clyster, Venæfction, and a purging Apozeme; then caused him to be placed near the Fire, and to anoint himself from the Soals of his Feet to his Groins, and so the Arms and Shoulders, and having put on his Stockings, Drawers and Waistcoat, he was laid in a warm Bed, and, with a Draught of warm Posset-ale, disposed to a breathing Sweat. Thus I proceeded daily in the anointing him, till I had wasted two Pound of Unction; but he had formerly taken so much Mercury, that it seemed to be familiar to him, upon which Account I proceeded in the anointing of him; but it ran downwards one Night in a *Diarrhœa*. I was fetched to him early in the Morning, and was informed he had had near sixty Stools. During the time I was with him they were mucous and bloody, with much Pain, he having a *Tenesmus* with it, which put him upon a continual Excretion. I caused a Clyster of Milk with Yolks of Eggs to be cast up, and prescribed *decoct. C. C. calcinati* to be made, and drank with Milk, to some of which I added a few Drops of liquid *Laudanum*. I also injected *in ano* three or four Spoonfuls of *ol. hyperici* with a Syringe, and advised it to be often repeated, to defend the interior Coats of the Intestine from Excoriation. I prescribed him a Pearl Julep and *Elect. diacord.* as it is set down in the Method of Cure, to be taken once in three or four Hours; thus in four or five Days the *Diarrhœa* stopped. Then I prescribed him a *Sarsa* Drink, with an Addition of Milk, till he had somewhat recovered his Strength; purging him in the Interval with *elect. diacatholic.* &c. By this *Diarrhœa* he was freed of his Pains, and of some of the Nodes. Those which remained were much lessened, and by a strict Diet, *decoct. sarsæ* and Sudorificks, were quite resolved, and he enjoys a good Health to this Day.

It may here be objected by some, that if this Person had been more purged, or well bathed before the anointing, the Salivation would have risen easier, and thereby the *Diarrhœa* might have been prevented. I do confess that

that the bathing doth much facilitate the raising of the Salivation, but we cannot have always that Conveniency. Besides, where we do bathe, these Accidents have happened, and will befall any one of us in spite of all our Endeavours. Yet I must tell you, when a *Diarrhoea* thus happeneth in the raising a Salivation, it renders your Cure certain, if you prosecute the Method as I here did. For whether the Mercury work upwards by Vomit or Salivation, or downwards by Stool, it is not material, so the peccant Humours be evacuated, and disposed to be carried off by Sudorificks, &c. But if the Patient grow froward upon such an Accident, and will not submit to a Regulation in Diet, Purging, Sweating, &c. the Humours do again ferment, and render the Cure more difficult.

One of about forty five Years of Age, having been long afflicted with the *Lues* in its most inveterate Symptoms; Nodes, Gummata, and an *Ozaena*, and had passed through many Courses of Physick, came to me extreamly Nodes, and extenuated. He had one Node upon the *Lambdoides* Gummata. very great, and another upon his right Eye-brow; others upon his Arms and Legs. I began with the letting him blood, and sent him a Clyster that Evening. I syringed his Nose with *decoct. hordei, rad. althææ, sem. cydon,* &c. and after I had cleansed it of its crusty Matter (with which some Bones came forth) I daily injected some of the Lotions prescribed in the Method of Cure. I bathed him five or six times, and the while kept his Body soluble by Clysters, or by a lenitive Electuary, and allowed him boiled Mutton, Veal, or Chicken for his Dinner, and a couple of new laid Eggs for his Supper, a small Ale for his Drink. I also prescribed him a Grain of *Laudanum*, or some anodyne Draught to appease his Nocturnal Pains. After I had done bathing him, I caused his Legs, Arms, Shoulders, Spine, and Hips to be anointed daily, and sweat him in a warm Bed with a Draught of Posset-drink. After he began to spit, I anointed him more sparingly, only his Legs and Arms; and when I saw his Chaps fwelled sufficiently, I forbore the anointing, and kept him to his Posset-drink and Broth, washing his Mouth with *decoct. hordei, rad. althææ, liquoritiæ,* &c. He salivated very well near a Month, but before he had spit fourteen Days, the Pains

A a 3 diminished,

diminished, and the Nodes lessened, and that filthy Matter ceased to discharge out of his Nose: Also a *Gumma*, which seemed ready to burst, dried up. In the Declination of the Flux I put him into a strong *decoct. sarsæ, &c.* with Milk, and nourished him with good medicated Broths. As his Strength increased I purged him with the bitter Decoction some Days, and after his Chaps healed, I kept him strictly to the *Sarsa* Drinks without the Milk, and sweat him with *antimon. diaphoret. gum. guaiaci, bezoard. orient.* and ordered his Diet as drying as he was capable of, purging him, as customary, once in four or five Days. Thus in the Space of eight Weeks the *Ozæna* was perfectly cured, and all the Nodes resolved: But notwithstanding, he complained of Pain in all his Limbs, and was so weak that he was scarce able to go, and bemoaned his Condition, supposing he should never be cured. I was of opinion that he was cured, and that those Pains proceeded merely from the Emaciation of the Muscles; but I referred it to a Consultation, where it was declared positively that he was not cured, and that he ought to salivate again. These Proposals dismay'd the Patient, and disturb'd me not a little; for, in truth, he was too weak to salivate. I persisted in my former Opinion, and prevailed with the Patient to retire two or three Miles into the Air, and there to drink a Decoction of *Sarsa, &c.* with Milk, and to give himself Liberty to feed upon Meats of good Nourishment, and advised him to bathe in Milk and Water some time. He did so, and I supplied him with Papers of Ingredients to make the Decoction, also with a lenitive Electuary of *Cassia, Tamarinds, Manna, &c.* to keep his Body soluble. In a few Weeks he grew fleshy, his Pains wasted, and from that time he enjoyed a good Health for many Years.

59. Observation.

One about twenty eight Years of Age was afflicted with an *Ozæna* of an old Date; it had perforated the *Septum*, and cast forth some rotten Bones, one whereof he shewed me. He had also Nodes on both his Legs, and on his right Arm. He was emaciated by reason of his continual Pains, and the much Physick he had unsuccessfully taken. I injected a Decoction *Hordi, &c.* into his Nostrils, and after the crusty Matter separated,

separated, I prescribed him an Errhine to snuff up his Nostrils often in a Day. And having resolved to salivate him by Unction, I disposed his Body thereto by Clysters, lenitive Bolusses, (to which latter I added *Calomel.* to take off his Pains) and prescribed him *decoct. sarsæ, &c.* with Milk, also a Liberty in Diet, and bathed him the while. Having thus somewhat recruited his Spirits, I caused him to be anointed, Legs, Arms, Hips and Shoulders, till I had raised a Salivation. Then I kept him to Posset-Drink and Broth. I also allowed him a Pint of Ale daily, sometimes burnt Wine or other Cordials, by which he was enabled to salivate near a Month. During that time the *Ozæna* cured, and some of the Nodes resolved. As the Salivation declined I purged him with the bitter Decoction, and then put him into a *decoct. sarsæ*, and sweat him with Dia-phoreticks, and purged him once in four or five Days, he observing the while a strict Diet. After all I bathed him again a Week or ten Days, and permitted him a nourishing Diet, and kept his Body soluble *cum elect. noſt. laxativo ex Cassia, pulp. tamarind. manna, &c.* Some of his Nodes remained till I had bathed him; but if they had not then resolved, yet I should not have doubted of his being well cured: For it doth sometimes happen, that great Nodes dry and harden into such an *Exostosis* as will not yield to any Remedy. And indeed they being without Pain, we need not be so solicitous in their Removal; for beyond Sea I have seen some well cured, the Nodes continuing upon their Legs knot-ed like a Crab-tree Stick

A Woman of about fifty Years of Age, of an ill Ha-
bit of Body, having passed through various Courses of ^{60. Obser-} *unction of* Physick, was brought to me, complaining of Pain in Lues Ve-
her Arms, and Nodes on the Back of both her Hands; *nereæ com-*
also a cancerous Tumour on her right Breast. She im-
portuned me to put her in a Course of Salivation by *Cancer, &c.*
Unction, and took a Lodging near me. I thought it
necessary enough for her, and told her I would pre-
pare her Body for it, and consult her Physician in the
Manner of salivating her. Accordingly I let her blood,
then purged her with a Solution of *Manna* and *Cremor*
Tartari in Posset-drink, and bathed her four or five
times; then gave her alternately two or three Doses of

Calomel. to try how the Flux would rise. But she growing impatient in the Delay, sent for a Physician, to whom she related the Original of her Disease, and that she had taken the Spitting-pills formerly unsuccessfully, therefore desired to salivate by Unction. Some Objection was made against it, as doubting her *Visera* were naught. But he complied, and promised to visit her as Occasion should require. I sent her a Pot of Unction the next Day, wherewith her Legs and Arms were anointed, and she returned to her warm Bed, and was disposed to a breathing Sweat by a Draught of Posset-drink. By this Method the Salivation was raised, and she flux'd moderately about twenty Days, during which her Pains remitted, the Nodes resolved, and she recovered the Use of her Hands. The Cancer lay also quiet. The Salivation declining, she was purged with the bitter Decoction, and some Days after drank a *Sarsa* Drink, and sweat. In the going off of her Flux she complained of the Shortness of Breath, and was afterwards subject to Fainting. Whereupon her Physician was consulted, who, supposing it hysterical, prescribed as followeth, Rx Galbani sagapeni, an. 3j. ase-fætid. ℥s. castor. ʒj. baſi. Peruv. q. s. f. pil. quarum capiat ʒj. omni nolle. Rx Galbani 3vj. fiat Emp. pro umbilico. Superbibat post filu'as Julapii ſeq. 3ij. Rx Aq. brion. corp 3ij. pulegii mirabilis; hyſſopi, an. 3ij. tinturae croci 3ij. ſacchar albif. ʒlb. mſ. f. Julapium. After she had proceeded in this Course eight or ten Days, she complaining of her Stomach, and of an offensive Smell she thought arose from thence, her Physician prescribed her as followeth: Rx Salis vitrioli ʒij. capiat statim in Posset-a'la: si ſenſe tantum vomuerit capiat ʒj. ejusdem in eadem Posset-a'la, and ſo to repeat it the third time, if her Strength would bear it. She did ſo, and was laid to Rest with this following Draught: Rx Laudani gr. j aq. menthe ʒl. cinnamomi pulveriz. ʒl. diaſcordii ʒij. f. Haſtus horæ ſomni. The Day following the Physician found her much relieved, and prescribed her this Decoction. Rx Sarsæ 3ij. ſantali albi ʒij. clinae ʒjs. guaiaci ʒj. digere horæ ſex in aq. com. ʒvij. vafe clauſo, dein decoq. ad medias, addendo ſub finem ingredientia decoct. pectoralit. Bibat copioſe & frequenter, addendo ſingulis haſt. mix: ſr. o ſequentis coch. 1. vel 2. Rx Aq. linac. brion. comp an. 3ij. ſig. croci ʒl. ſp. caſtores ʒjs. mſ. This Potion was also Prescribed

prescribed her three or four Days after: Rx Tamarind. 3ss.
 $cq.$ in aq. com. sub finem addendo, senæ 3ij. rhab. 3ij.
 sem. anisi 3ss. cape colaturæ 3iv. mannaæ 3vj. syr. de rhab.
 3j. syr. de spina cervina 3j. f. Potio. By these Prescrip-
 tions she somewhat recovered, and removed from those
 Lodgings to others more airy in the same Street. And
 there another Physician was consulted and joined with
 the former: He approved of what had been done, and
 gave Hopes of her Recovery; and together they pre-
 scribed as followeth: Rx Gum. Galbani, ammoniaci, myrræ,
 bals. Tolut. an. 3j. croci gr. iv. cum opobals. Gilua-
 ditui 3ss. f. pil. quadruplo deaurandæ: cap. bis terve quo-
 tide. Rx Gum guaiaci cathartici 3j. syr. e capil. Veneris
 q. s. fiat mixtura mollis, quam capiat tertio quoque mane
 ad quatuor vices. Rx Aq. ceras. nigr. 3vj. e flor. para-
 lys. aq. cinnam. bord. an. 3ij. margar. preparat. 3ij. sacchar.
 crystal. 3ij. ms. f. Julapium, de quo bibat ad placitum.
 Some while after she removed nearer the Country for
 the Benefit of fresh Air, and to drink Asses Milk, which
 she had already began to do, and might have recovered,
 if her *Viscera* had not been all rotten.

A poor Fellow, aged about fifty Years, had grievous 61. Obser-
 Pains in his Head, and divers Nodes and Gummata in vation of
 several Parts of his Body. He had lately come out of *Nodes and*
 a Course of Physick, and was so wasted as he could *Pains*.
 scarce stand, and had lost the Nails of his Fingers
 and Toes. I directed him a Clyster, and that Night
 sent him an Opiate to calm his Pains and dispose him
 to Rest, viz. of *Laudan. mer. dul. gum. guaiaci, &c.* as
 is set down in the Method of Cure, and repeated it as
 Occasion offered; and prescribed him a *Sarsa* Drink
 with Milk. But after two or three Days, observing that
 he was much oppress'd in his Stomach, nauseating all
 that he took, I gave him a Vomit of *infus. croc. metal-
 lor. with oxymel. scillit.* by which I emptied it of much
 viscous Flegm. From that time he recovered his Ap-
 petite, and by good Nourishment and Mitigation of his
 Pains, he recovered to a tolerable Measure of Strength.
 I then caused him to be anointed, Legs, Arms, Hips,
 and Shoulders, and repeated the anointing daily till I had
 raised a Swelling in his Chaps. He salivated well, and
 was kept to warm Broth, Posset-drink, and sometimes
 Ale and burnt Wine. During the Salivation he fainted
 often,

often, and was seized twice with Convulsions, and with much Difficulty I kept up his Spirits: But he got through it by the Help of good Cordials, *Aq. theriacalis, &c.* In the declining of the Flux I purged him with the bitter Decoction, and finished the Cure with *decoct. sarsæ*, Sweating, and drying Diet, and Purging. Passing by this Man's House one Day in the Company of Dr. *Wal. Needham*, we went in, he was working in his Trade; he shewed us his Legs and Arms, there was not a Node left; he also shewed us new Nails thrusting out, the Patient then declaring himself well, and indeed so he continued a Month or two, and then Pains began, Nodes and *Gummata* also arose. I attempted the Cure by crude Mercury, as it is usually given by some under the Name of the *Blue Pills*, with a strong Decoction of *Sarsa, rad. bardanæ, fol. saponarie, and Laureola*. Indeed I consulted several that pretended great Matters in the Cure of this Disease, and omitted nothing whereby I could hope to relieve him, applying also Emplasters and caustical Medicaments to the Nodes, by which I did resolve the biggest and most painful of them: But the Malignity encreasing, the Patient made it his Request to me to salivate him again by Unction. Whereupon I let him blood, and directed a Clyster, then bathed him four or five times, and raised a Salivation by only anointing his Legs and Arms according to his Desire. He salivated very well; and, during the Salivation, he was freed of his Pains and Nodes, and, by the prosecuting the Course by Diet-drink, Sweating and Purging, he seemed perfectly well; but yet he relapsed. I afterwards perceived his Wife had been all the while infected with the same Disease; but whether he got it from her, or through Neglect of observing this latter Course, his Necesity in following of his Trade constraining him to be daily abroad and in his Shop; (and without a strict Observance in that Course, you will scarce cure the lesser Species of the *Lues*) I contented my self in the Expences I had been at, and left him to others.

62. Obser- A Man, of about thirty Years of Age, came out of *vation of* a long Course of Physick to me, having an old *Ozæna* *Ozæna and* whereon some Bones had cast off: He had also Pains *Nodes.* in divers Parts, and several Nodes. I resolved to salivate

livate him by Unction, to which Purpose I let him blood, purged him, and anointed him, Legs, Arms, Hips, Shoulders, &c. by which, in few Days, I raised a Salivation, kept him to Posset-drink and Broth, and took care of his Mouth. His Nose was also dressed daily, as hath been shewed in the like Case. In the Declination of the Flux, I purged him with the bitter Decoction, and prescribed a strict drying Diet, *decoct. sarsa*, Purging and Sweating, and dismiss'd him cured of the *Ozæna*, and the Nodes and Pains resolved. But some Months after, he relapsing came to me again, and acknowledged that he had not been so regular in his Diet as I had directed him (and in truth I had heard he had bragged of it) and that he would enter into a new Course of Physick. I let him blood, and purged him six or seven Days with the bitter Decoction, then vomited him with *Turbith minerale* three or four times, prescribing Clysters between while. After I had thus heated his Chaps, and disposed the Matter for Sudorificks, I put him into a Decoction of *Sarsa*, and with *merc. diaphoret.* sweat him twice a Day, and kept him to a strict drying Diet; and by this Method I cured and secured him from Relapse; and so shall do as many as will submit to it; an Instance whereof may be seen in many of these Observations.

A Man of about thirty six Years of Age came to 63. *Obser-*
me with an *Ozæna*, Ulcers in both the Tonfils, and *vation of*
Nodes, with Pains in several Parts of his Body, which *an Ozæna*
together had extreamly emaciated and weakened him. *and Ulcers*
I syringed his Nose with a lenient Lotion, according to *in the Ton-*
my Custom, and afterwards prescribed some of the *fils, and*
other Errhina for daily Deterfion. I also dressed the *Nodos.*
Tonfils with *lac sublimat.* In order to his Cure, I let
him blood, and prescribed a Clyster, and that very
Night sent him 3j. *merc. precipitat. albi*, which he
took in a Spoonful of white Bread and Milk, and re-
peated the giving of it three or four Nights after one
another, carrying it off by Clysters daily. During
which I allowed him medicated Broths, Posset-ale, and
a Pearl Julep. After I had thus disposed his Ulcers to
Digestion, so as that he was in a Capacity to eat Meat, I
permitted him to eat such as was of good Nourishment,
and prescribed him a Decoction of *Sarsa*, &c. with an
Addition

Addition of Milk to drink daily, and every other Morning gave him a few Grains of *Theriac. metallor.* in 3s. *conf. melissæ*, and thereby vomited him moderately, and purged him once or twice, and continued the Use of Clysters accordingly as I saw Cause, and bathed him often, I suppose eight Days. Thus I removed his Pains, and cured the Ulcers, and purposed to have put him into a strict Diet, and to have finished the Course by Sudorificks, &c. but some of the Nodes remaining, and the Patient having long before met with great Difficulty in his Cure, earnestly importuned me to salivate him by Unction, alledging it the sure Way to prevent Relapse. I seeing his Desire, and supposing it might be reasonable, did comply with him, and caused his Legs and Arms to be anointed daily till his Cheeks swelled. Then I kept him to Posset-drink and Broth, and took Care in the washing his Mouth. He salivated well about sixteen or seventeen Days; but then growing weak and faint, I caused his Feet and Legs to be bathed with warm Water, and fresh Linen to be put on, and by Clysters disposed the Matter downwards, and kept up his Spirits with Cordials. Having thus refresh'd him, I purged him proportionably to his Strength, and finished the Cure by a Course of drying Diet, *decoct. sarsæ*, Sudorificks, &c. in three Weeks. But he being extreamly pained in all his Limbs, suspected his Cure; but the Nodes being resolved, and the Ulcers so long before cured, I encouraged him to take his wonted Nourishment, supposing these proceeded from the Emaciation of the Muscles; yet I prescribed him a medicated Ale, and advised bathing a few Days; he did so, and found as his Strength recovered, so his Pains lessened. He removed afterwards to Paris, where he enjoyed his Health and a quiet Mind, till one Night, upon Change of Lodgings, he was bitten with Musketoes, and seing his Face next Morning so swelled, he consulted Physicians and Chirurgeons, who would needs persuade him it was venereal, but it proving otherwise, he escaped the grand Course, but was bathed often.

64. Observations of a Gunma. A Woman of about forty six Years of Age was committed into my Hands. The hairy Scalp on the *Frontis* had been some while ulcerated, and the Bone corrupted the Compass of a broad Shilling. I laid it open

open by a circular Incision, and dressed it up dry. The second Day after I took off the Dressings, and saw the Bone full of a loose Flesh arising out of the Cavities. I scraped the Bone, and dressed it up with *unguent. Ægyptiac.* warm, and digested the Lips the while. Having thus exposed the Bone to exfoliate, I began in the internal Cure by bleeding and purging, and prosecuted it by salivating her with *Turbith min.* and in the Declination of the Flux I purged her with the bitter Decoction, and finished the Course by a *dēcoct. sarsæ*, drying Diet, and Sweating, and in the while exfoliated the *Cranium*, and cicatrized the Ulcer.

A young Woman came to me with an inflamed Tumour upon the *Fibula* of her right Leg; it seemed to have Matter in it, but upon a farther Enquiry I discovered it a *Gumma*. I applied an Emplaster *e bolo* to defend it from Fluxion, and caused her to be let blood. The next Day I purged her with *dēcoct. seneæ*, &c. and prescribed her an anodyne Draught that Night. The Day after I purged her with *extract. noſt. mag. & calomel.* and the next Day sent her ten Grains of *Turbith min.* in a Pill, which vomited her five or six times. The next Day a Clyster was administered, and the fourth Day after *Turbith* again; and so repeated the *Turbith* with Clysters proportionably, and in the Interval purged her sometimes with the bitter Apozeme to avoid Salivating. By this means I resolved the *Gumma*, and perfected the Cure by Diet and Diet-drink, Sudorificks, &c.

A poor Fellow came to me with a carious Ulcer on the *Os Frontis*, which had been of a long Continuance: The Bone was white, yet corroded much, and filled with an *Hypersarcosis*, as most of these sort of venereal Ulcers are. He was let blood, and purged four or five Days with the bitter Decoction, and took every other Night 9j. *Calomel*. After I had thus purged him, I laid open the Ulcer by a circular Ablscision, and dressed it up dry. The second Day I opened it again, and scraped the Bone and loose Flesh off, and applied Dossils preſed out of the Tincture of Vitriol, and dressed up the recent Lips with the Digestive, *ex terebinth. cum vitello ovi.* After I had thus digested the Ulcer, and disposed the Bone to Exfoliation, I raised a Salivation by a few Doses of *Turbith. min.* during which his Landlady discovering his

his Disease, wotild not permit him to lodge longer in her House. Whereupon he removed, unknown to me, to a common Ale-house some distance off. Walking thither in a cold Winter Day to a Lodging as cold, the Salivation check'd, and a Shortness of Breath, with frequent Fainting followed, and increasing upon him, he died in spite of my Endeavours, and those I consulted.

67. Observation of a Caries in the Os Frontis. A Man, aged forty four Years, of a plethorick Body, half a Year after he had been cured of a Chancre, began to complain of a Pain in the Fore-part of his Head. A Tumor appearing in that Part some time after, he consulted a Chirurgeon, who opened it by Incision, and dressed it with a Dossil of Lint, and left him to his Chirurgeon to cure: But in Progress of Time the Ulcer enlarging, and the Bone growing more carious, the Patient consulted another Chirurgeon, who told him it was the Work of Nature, and that in time the Bone would cast off. The poor Man believing what was said, took care to have it dress'd accordingly by the same young Chirurgeon, till the *Caries* had infected the Bone almost the whole Length from the coronal Suture to the Brows. And then he came to me for Cure; and having lodg'd himself near me, I went to dress him, and saw a great Discharge of a foetid Matter, and the Lips of the Ulcer lying hollow over the rotten Bone. I cut them off round so far as the Bone lay carious under them, then dressed up the Wound and Bone with Dossils of dry Lint, &c. Then knowing that there were no Hopes of curing him without the Use of Antivenereals, I order'd a Clyster that Evening, and began the next Morning to purge him with an Infusion of *Senna*, *Rhab.* &c. (for I had permitted him to bleed sufficiently in the Extirpation of the callous Lips.) The third Day I renewed dressing, and saw a Pulsation of the *Dura Mater* through several small Apertures in the carious Bone. Upon Sight whereof I had Thoughts of setting on a Trepan, but there being no immediate Danger, I proceeded with Mercurials, and gave him 9j. *Calomel* that Night, and purged it off the next Morning with a Draught of the bitter Decoction, and repeated the same Apozeme four or five Days, giving him *Calomel* every other Night. Whilst I was purging him, the Matter abounded much, and flowed downwards into a remaining *Sinus* between his

his Brows; to prevent which, I made a Bandage with good Compression on that Part, and dressed the rotten Bone with Dossils pressed out of *Sp. vini*, and continued that Method of dressing daily. And that I might hasten the Exfoliation, and Cure of this Ulcer, I gave him the Morning after *Turbith. min.* gr. xij. which vomited and purged him. I repeated it once in two or three Days, till I had raised a Salivation, during which the sinuous Ulcer healed by Agglutination, and the Matter accordingly lessened daily, and lost its foetid Smell; the Bone also cast off in its Circumference, and loosened in the middle, so that I broke those foremention'd Apertures into one another, and raised up one Piece of the *Cranium*, consisting of both Tables, and made way for the Callus to thrust off the remaining Sides of the Bone, Part whereof cast off soon after, and the Ulcer incarned, and is now cicatrizing. There was a Node upon the right Jaw, which is partly resolved. The Patient is yet in a Course of Diet-drink, Sweating and Purgings, in order to the Confirmation of the Cure, which I think there is no doubt of.

A Man about thirty four Years of Age was command- 68. *Observation of Ulcers and Nodes, with the ill Consequence.*
ed to my Care. He had several Nodes on his Legs and Arms, one whereof, upon his right Leg, was big and much inflamed. He had also some Breakings out about several Parts of his Body, and *Caries* in both his Jaws. He had passed through many Hands, and came then out of a Salivation raised by some Mercurial Pill, and (as he said) had spit between four and five Quarts a Day the Space of three Weeks. I designed Salivation by Unction. In Preparation thereto I let him blood, purged and bathed him, then caused his Legs and Arms to be anointed till his Chaps swelled, and the Salivation arose moderately; then I put him to the drinking Posset-ale and Broth, and took care of his Mouth. All things thus likely to succeed well, I having a Command to make a Journey of four or five Days into the Country, recommended him into careful Hands, purposing at my Return to raise the Salivation higher, if there were Occasion. About the fifth Day after, at my Return, I found my Patient much indisposed, with a Shortness of Breath, and frequent fainting. The Swelling in his Face was sunk, yet was his Mouth much ulcerated;

and

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and his Jaws so contracted, that he could scarce open them, to take in a Spoonful of Broth; his Spitting check'd, his Body costive, and the Urine he made little and high-coloured. I caused a Clyster presently to be administered, and sent for a Quart of *aq. antisyph.* of which I gave him some, and advised the taking it once in two or three Hours. I syringed his Mouth with *decoct. hordei, liquiritiae, & mel. magist.* and put a folded Rag between his Jaws, which I had before advised his Nurse; but she was one of his chusing, and ignorant in this Work.

I also advised him to hold some of the Gargle often in his Mouth as hot as he could endure it, and made up a Mixture of some *mel. magistralis* with *sp. vitrioli* to dress some other of the Ulcers which required Deterision. I also prescribed him a Lambitive of *ol. amygd. dul. &c.* to help Expectoration. The next Day I purged him with a *decoct. tamarind. cassiae fistul. senae, &c.* to which was added *syr. de ros. solut. manna, syr. de sp. cervina,* and repeated it the second and third Days. It wrought moderately, and somewhat relieved him. In the washing his Mouth with a Syringe forcibly, I put him upon excreting a great Quantity of a filthy Matter, amongst which there seemed somewhat like what we call purulent. I not imagining whence it should come, indeed never having seen the like, consulted Dr. Denton, who advised me to purge him with *Barnet Water*, a Quart or more at a time, with a Spoonful or more of *syr. de sp. cervina* in the first Draught, and so to proceed accordingly as it passed. I did so, and observing it to pass both by Urine and Stool, I repeated the Use of it five or six Days, and the while kept up his Strength with good Broths, &c. After I had thus emptied his Bowels, that Discharge of Matter ceased, and he recovered. Then I bathed him, and prescribed him medicated Broths, &c. also *decoct. sarsæ*, and kept his Body soluble by lenient Purgatives once in three Days.

By the frequent syringing and gargling his Mouth, and dressing the Ulcers, I healed that; but by reason of the Contraction of the Jaws, the Ulceration and *Caries* increasing upon the old diseased Parts of the Jaws, some of his Teeth drop'd out, and at last I was forced to cut the contracted *Callus*, and that way enlarged his Jaws.

Whilst

Whilst these varius Accidents affected the *Viscera* internally, his Nodes and Pains discussed, his Skin also was freed of its Foulness, and he seemed perfectly cured; yet to secure him from relapsing, I prevailed with him to continue his Diet-drink, and to sweat with *Antimon. diaphoret. &c.* and to purge between-while. To which Purpose I supplied him with Materials, and he retired a few Miles out of Town, and prosecuted the Course, and came from thence to Town well-heal'd, and enjoys a good Health to this Day.

A Man, aged forty eight Years, having been long dis-eased in the Country, and taken much Physick unsuc-^{69. Observ-}cessfully, was afterwards advised to the Bath, whither Lues Ve-he went; but those Waters not being suitable for his nerea, Disease, he returned to London much emaciated, and with Com-very sick and weak, and consulted two Physicians and plication of my self. He had Nodes upon his Arms, Hands, and Diseases. Fingers, and indeed had no use of them. His other Limbs were affected with Pain. He had an Ozæna of an old Date, whence several rotten Bones had cast off. His Jaws were also carious. There were small Hopes of his Recovery, yet we were obliged to attempt it some way, and in order thereto Lodgings were provided for him near me, and we began his Course of Physick with an Infusion of *Sena, Rhab. &c.* but his Stomach was so weak, that he had a long time nauseated all sorts of Sustenance, and vomited this Potion. Upon notice where-of we prescribed him *sal. Vitrioli*, and emptied his Stomach of much viscous Flegm. A Clyster was administer'd that Evening, and we laid him to Rest that Night with an anodyne Draught. The next Morning he was let blood in the Arm, and purged the Day after with a Solution of *Manna, Crem. Tartar.* in a Draught of Posset-drink, and the next Day we bathed him in Water luke-warin: He fainted in it, and was feized with a Shortnes of Breath after he was in Bed, which lasted about an Hour; yet we proceeded in the bathing him daily the Space of a Week, and relieved him in those Fits with Cordial Waters, and kept his Body soluble by Clysters. Having thus prepared him for other Remedies, we prescribed him *Calomel*, but which way soever he took it, he vomited soon after. We then sent a Pot of *unguent. Neapol.* by a Servant, who rubb'd

Part of it on his Arms, Thighs, and Legs, and disposed him afterwards to a breathing Sweat with a Draught of Posset-drink: Thus he was anointed several Mornings, till his Chaps swelled and his Mouth ulcerated. Then we took care in washing his Mouth with lenient Decoctions, and nourished him with medicated Broths and Posset-ale, permitting him some time to take a little burnt Wine, *aqua theriacalis mag.* to support his Spirits. By which Method he salivated twenty six Days, and was freed of his Pains; the Nodes also resolved, and he recovered the Use of his Hands, and the rotten Bones cast off from the *Ethmoides, &c.* The Salivation declining, the bitter Apozeme was prescribed him; Decoctions of *Sarsa*, with the Addition of a little *Aqua Mirabilis* were also allowed: But our Patient had been obstinate and ungovernable in the whole Course, and was now at last so averse to every thing was prescribed him, that in truth he neither purged, drank his Diet-drink, or sweat as he ought; and through that Omission, the serous Humours abounded, and began first to swell his Legs, then his Thighs, and somewhat his Belly. His Arms and Hands afterwards swell'd, and at last his Eye-lids and Face, and an Itch brake out all over his Body, which by his rubbing and scratching excoriated the Skin in several Parts and was very vexatious to him. At the first Appearance of these anaeraceous Swellings, various Internals were prescribed, but he only took Cordial Waters, in which we infused sometimes Purgatives, whereof this following was one: Rx Spec. diamosch. amari 3js. aloes 3j. sp. vini 1bj. eliciatur tinctura s. a. capiat cochlear. 3. pro vice, repetend. ad placitum. Some such like Tincture was also added to *aq. lumbricorum*. &c. We having no other way of purging him, the Serosity increased, and overcoming the natural Heat, he died.

Obser- One of a strong Constitution having been diseased *nation of* seven Years with the various Species of the *Lues*, and the *Tonsils*, had passed through many Hands beyond Sea and here, *Onixa and* and hath been taken notice of by me in one of the former Observations for his Irregularity in that Course of Physick, came to me again within a Year after, lamentably afflicted with Ulcers in his Tonsils, Palate and Nose, &c. (I being then imprisoned by the Fanatics in *Lambeth House*) he consulted others, but came afterwards

to me, desiring my Opinion of his Disease, and what Hopes I had of restoring those ulcerated Parts to their former Use and Shape. The Ulcers in the Tonsils and Nose were large, and accompanied with Inflammations and Tumour, and thereby occasion'd a great Difficulty in swallowing his Drink, the most Part of it running out at his Nostrils. On the Ridge of his Nose there was an *Herpes exedens* with a *Caries* in that Bone, and upon the left side of his Nostril another, which had penetrated thro' that Cartilage, and an *Ozæna* within, which had corrupted Part of the *Ethmoides* and the lower Part of the *Septum*, insomuch as there only remained the exterior Skin to divide the Nostrils, and that being ulcerated, could not defend it self long from being eaten in pieces. He had also some Nodes upon his Legs, but the Ulcers in his Nose were they which threatned the Danger, yet there were Hopes of curing them, if a Course were speedily taken. He returned somewhat satisfied, and the next Day sent for two eminent Physicians, and procured leave for me of my Keeper to meet them. I represented the Condition of the Ulcers to the Physicians, and proposed to them the raising a Salivation by Unction as the speediest way to prevent the farther Erosion. They had no great Opinion of Salivating, but did comply with me, and promised the Patient to visit him often during the Course.

The Patient had been let blood, and purged by their Prescriptions; upon which Consideration I prescribed him 3j. *Calomel* in a Spoonful of white Bread and Milk to take that Night, and advised them to bathe him the next Day; also to repeat the *Calomel* for some Nights, hoping thereby to check the corrosive Quality in the Ulcers; and I also advised to repeat his bathing, in order to the Salivation I intended by the Unction. Care was also taken to keep his Body soluble by Clysters, or lenient *Bolusses*. I directed one of my Servants to dress the Ulcers, some with Lenients, and others with Detersives.

Whilst the Ulcers were thus disposing to cure, my Liberty was procured, and I again attended the Patient; and having prepared all things ready, began to raise the Salivation, by anointing his Legs, Arms, Shoulders, Spine and Hips, and repeated it daily, and afterwards put him into a warm Bed, and disposed him to a breathing

Sweat, with a Draught of butter'd Ale to gratify his Palate. The rest of the Day he drank Posset-drink, &c. During the anointing, some of the Lotions were syringed twice or thrice a Day into his Nostrils. Gargles were also used to wash his Throat, and the Ulcers of the Tonsils and *Uvula* touched with *lac sublimat*. Those Ulcers without were deterged and smoothed fit to heal, as Nature should be disposed thereto. And that little Bit of Skin, which served to divide the Nostrils, likewise healed.

I continued anointing this Patient till I had wasted near three Pounds and a half of the Unction, yet his Chaps would not swell, nor did he spit a Quart in twenty four Hours. But during this anointing he was freed of his Pains, and the Ulcers cured as well as I could defire. But how far this would serve to eradicate such an inveterate *Lues*, I much doubted. The Physicians seemed also to distrust my Undertaking, considering I did not salivate him, as I had proposed. The Patient also became weary of the frequent anointing. Upon which Considerations I was somewhat troubled, and endeavoured by Clysters to move it downwards, wishing it would end in a *Diarrhœa*; but it not moving that way, nor any other way disturbing him, I concluded his not salivating to proceed from the Quantity of Mercury he had formerly taken, and that possibly it was become habitual to him. Supposing it might be so, I caused some mercurial Emplasters to be applied to his Feet, Legs and Arms, and sweat him again in his Bed moderately. And after these, seeing the Salivation not yet arise, I gave him *Turbith. min. gr. xvij* in a Pill with *eons. boraginis*. It vomited him twice or thrice considerably. But from that time he began to be feverish and faint, and the Matter much indisposed, by which I judged it necessary to purge off. To which Purpose a Clyster was administred, and the Plaisters taken off, and fresh Linen put on. He took the bitter Decoction five or six Days, making large Evacuation that way. During which his Mouth was frequently washed and disposed to cure; and I put him into a Decoction of *Sarsa*, and strict Diet, sweating him with *antimon. dia-phoret.* &c. as before hath been prescribed in such like Cases. I continued him a Month in this Course, and being

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being then satisfied that he was well cured, and secured from farther Relapse, the Physicians were sent for, and saw the several Ulcers cicatrized; that on the Ridge of his Nose, where the Bone had been bare, was healed smooth, without any visible Exfoliation. If the Cartilage on the Side of the Nostril did exfoliate, it was cast off into the Nostril, for the Cicatrix lay close and transverse as a small Seam. Within his Nose there was a great Vacuity, but nothing of *Caries* or bare Bone, nor did he blow any thing of Filth, as formerly he had done. And that his Palate and Tonsils were as well, appeared both by his Voice, Eating and Drinking. His Legs were also as free from Nodes as Pains. The Physicians judged him cured, yet would not yield the Cure to the Salivation; but in other Cases of that kind, where I afterward propos'd Salivation, they would reply upon me, that I did not salivate such a one, meaning this Patient: To which I always answered, the Cure consists not so much in the spitting a great Quantity, as in putting the Matter upon such a Ferment as might fit it to be carried off by the Sudorificks, Purging, &c.

This Person retired afterwards into the Country, and returned to *London* at the End of two Years, and acknowledged to me his Cure, by settling thirty Pounds a Year upon me during his Life, and paid me sixty Pounds for the two Years past.

I am not ignorant that there are a People who pretend to cure all the fore-mentioned Species of *Lues Venerea*, without running such long Courses, or keeping their Chamber: But it is their Undertakings which make us so much Work; yet truly, I do believe, that all those who are of a fleshy and strong Constitution, may be cured without Salivating by Unction, if they would patiently submit to so strict a Course of Diet, &c. as that way requireth.



C H A P. V.

Of GONORRHOEA.

Gonorrhœa, what **G**onorrhœa in general, may signify any Flux of Seed from the Body; but Custom hath appropriated it to that which is involuntary.

The Antients have confined that Appellation to a Loss of Seed which happens without Erection or Tentigo; or if you will have it in Celsus his Words, *sine venere vel nocturnis imaginibus*. But Moderns have given a larger Account of Gonorrhœa, and do find many Differences of it.

Its Differ-
ences.

As First, That which comes from a Fault of the Vessels: As first, from natural Coldness or great Refrigeration, in which Case they lose their retentive Faculty; or secondly, which is more frequent, from Friction and Masturbation among young Boys (when they first come to Puberty); thirdly, from violent straining; fourthly, from the Laxity of the seminal Vessels in general; fifthly, from Erosion of the Caruncle in the Urethra, which covereth the Exit of the *Vesiculae seminales* and *Vasa deferentia*, and is indeed the Sphincter of them; sixthly, in epileptic Cases we find *Profluvia Seminis*, which seem to be caused by the Strength of the Convulsion.

Secondly, That which cometh from Fault in the Matter of the Seed, viz. 1. When it is too crude, thin and cold, and so sweeps away insensibly. 2. When it is sharp, and comes away either with Titillation or Pain, sometime to the Erosion of the Urethra and the Excoriation of it. 3. When it is infected with a Virulence in the *Lues Venerea*.

It is this latter Species that is the most usual Employment of our Profession, the Diseases of those Parts being most frequently gotten by the too predominant Vice of the Age. I shall therefore confine my Discourse to that

that Subject, not only because it is one of the first Symptoms of the *Lues Venerea*, but also for that through the Patients slighting and neglecting its Cure, many ill Accidents do happen in Process of Time, which renders it much more difficult to cure than any other Species of the Pox.

A virulent Gonorrhœa is an involuntary Emission of Definition. Seed, occasion'd by Venom contracted from an unclean Woman.

Seed thus emitted is doubly peccant, both in *Quantity* and *Quality*. The latter is always proportionable to the Degree of the Infection, and to the Increase of Putrefaction.

The *Quantity* is likewise always far greater than the Vessels in their natural Estate are able to breed or to discharge, which hath caused a great deal of Contention among Physicians about the Seat of this Disease, or the Original of it. And indeed it is very odd to consider, that a Man upon Coition shall sometimes have nothing outwardly appear upon him, either by way of Chancre, *Bubo*, or any other Evil, but shall find his Urine hot, with a Flux of sharp and acrimonious Seed from within, the Continuance of which shall spend his Strength, erode the *Urethra*, make Caruncles and other Mischiefs. On the contrary, if stopped, shall cause Inflammations in the Testicles, or else a *Bubo* or Chancre; and if these happen not, shall infect the whole Body, breaking out in Scabs and Ulcers, or making Nodes, intolerable Pains, rotting the Bones, &c.

Where this Venom should enter, what Parts it should originally infect, and how insinuate it self, and afterwards cause such great Separations of spermatick Matter, &c. is worth our while to enquire.

The Way of its Entrance in a Woman is intelligible enough, but in a Man it can be no other than either the Passage of the *Urethra*, or the Pores of the Skin of the *Penis*, *Pubes* and *Inguina*.

The former seemeth not very likely, because it is not *Manner of* suitable to any other Circumstances of the Disease, *contracting* which doth seldom or never originally infect the *Ure- it*. 1. *Urethra* itself, or the *Prostatae*, &c. and never ascends into *Men*.

the Bladder; whereas on the other side we find visible Affections of the *Glans*, *Præputium*, *Inguina*, &c. to be the first Effects of the Infection.

We have therefore reason to believe that the Venom lurking in the *Vagina Uteri* of an infected Woman, doth, upon the Friction and Warmth that happens in Coition, fasten upon those Parts which it toucheth, *viz.* If it lie high within the *Vagina*, or the *Penis* enter not far in Coition, the *Glans* and *Prepuce* suffer to the Production of a Chancr. If the Coition were closer, and the Venom have possessed the *Labia Pudendi*, then the whole Skin of the *Penis* is infected, and the *Pubes* itself; where insinuating into those Pores, it doth not produce so visible Effects as it doth in the *Prepuce* and *Glans*, because the Skin is thicker. But then it is transmitted not only into the Mass of Blood in general, but also into the spungy Glandules of the *Inguina* in particular. If these or either of these be sufficiently swelled, and Nature strong, the Venom may discharge here; but if this happen not, then it creeps into the Blood, and there produceth Fermentations suitable to its Nature. The Matter of the Venom being originally corrupted Seed, doth therefore raise Seminal Fermentations, but withal one that is peccant, after the Nature of the Venom that excited it; by which means it happens that Spermatick Matter of a vicious sort abounds in the Blood, exhausts it of its best Spirits, and derives the Flower of it to the Seminal Vessels. This Matter is too much and too sharp to be long contained there, where it immediately provokes and stimulates Nature to an Excretion; and according to the Degree of its Acrimony and Corruption the Seed will be more or less thicker or thinner, white, yellow, green, &c.

I know Bartholinus hath made a *Gonorrhœa* to be nothing else but an Ulcer of the *Prostata*. Which Opinion is sufficiently confuted by Doctor Wharton, who gives him the insoluble Objection of the Tumour of the Testicles, which happeneth always upon the untimely stopping of it. *By the pounding up of the Water, it is easy to find which way the Current came.*

2. In Wo-
men.

In Women, the manner of the Infection is much more intelligible. Where the Infection of a corrupt venomous Seed enters into an *Uterus*, that is heated partly

partly by Coition, and partly by its own Appetite, it is greedily sucked in, and as fatally to the Misfortune of the Woman. There its first Attack is upon the innermost or glandulous Membrane of the Womb, usually acuating its Ferment, and causing a large Precipitation of Serum from the Blood. This is at first by modest Women mistaken for a *Fluor Albus*, (unless the Matter have been so highly virulent as to cause immediate Inflammations) and is so treated till worse Symptoms arise, and all is betrayed. What those are, we have already shewed you in Part, and more will appear hereafter.

The preceding Sign of it is Heat in Urine, then *Signs of it* succeedeth the Disease itself, *viz.* an issuing of white *in Men.* Matter in small Quantity, which by degrees increaseth, and groweth more corrupt and virulent, changing its Colour somewhat to a Yellow or Green: And about this Time it is accompanied with a painful Erection, and for the most part with a Contraction or Pricking in the *Urethra* under the *Frænum*.

In Women also Heat of Urine is felt, with a dropping of Matter from the Womb, at first resembling a *Fluor Albus*, but after a few Days it increaseth, and becometh purulent and foetid, with Diversity of Colours, making an Inflammation with Excoriation; also a bearing down of those Parts, and Pain in the Back. *In Women,*

A *Gonorrhœa* is more or less difficult of Cure, according to the Malignity from which it received its *Prognostick*. Original. Those that become suddenly virulent, and accompanied with *Stranguria*, are most difficult to cure. If they do stop without any manifest Cause, either a Chancre ariseth, or a *Hernia Humoralis*. If the Cure be slubber'd over, or long delayed, Caruncles arise in the *Urethra*, and in Progress of Time, a Carnosity, &c.

In the Cure of this Disease, we ought to have a special Regard to the Accidents above-mention'd, *viz.* Inflammation, Excoriation, *Stranguria*, &c. Therefore in the first place, we endeavour to temperate the Heat, then purge off the vicious Humours: Afterwards by moderate Detergents and Desiccants cleanse and dry the diseased Parts, and restore them to their natural Temper.

In order to the temperating of the Heat, and Acrimony of the Humours, a cooling and moistening Diet ought

ought to be prescribed, *viz.* Broths of Mutton, Veal, Chicken, &c. wherein may be boiled Endive, Lettice, Purslane, Sorrel, &c. Barley-cream, Grewels, Panadoes are also proper during the Pains. Their Drink ought to be Ptifans, Emulsions, Juleps, or medicated Ale: A small Ale, or White Wine diluted with Water may also be permitted.

All Exercise of the Body is prejudicial to their Healths, and consequently their rambling abroad prolongs their Cure.

A quiet Mind, with a patient Submission to their Physician and Chirurgeon, is also required; and that they forbear Venery, as they value their own and their Mistress's Healths.

The Evacuation may begin with a Clyster of the common Decoction *cum electuario lenitiv.* ʒij. butyri recentis & ol. amygdal. an. ʒjss. cum vitel. ovi. You may afterwards let them blood in the Arm, if you judge it necessary. Then purge them with *elect. diacathol. dia-prun. solut. diatassia cum manna*, or with a Decoction, *cassie fistulae, tamarind. bord. mundat. liquirit. florum trium cordial.* to which may be added *manna, syr. ros. solut. &c.*

After purging, it will be necessary to dispose the Humours to quiet by some anodyne Draught: Emulsions are also proper during the whole Course. Of which sort this may be an Example. Rx *sem. canabini ʒjss. sem. quat. frig. maj. an ʒj. sem. pavaver. alb. ʒij. amygd. dulc. excort. n. 16. decoct. hordei q. s. fiat. emulsio; dulcoretur cum sacchar. albif. aromatizetur cum aqua cinnamomi: sumat ʒvj. hora somni, repetatur ad libitum.*

If the Heat of Urine, and other Accidents increase, it may be necessary to give ʒj. *calomel.* in a *balus*, with some of the forementioned Electuaries, and to repeat it as you see cause once in two or three Days.

If by these the Accidents do not remit, bathe them in a *semicupium*, with an emollient Decoction, or Milk and Water; and to prevent Erosion in the *Urethra*, inject *decoctum hordei*, wherein hath been boiled *sem. altheæ, cydonior.* or some of the lesser cold Seeds; and, if you will, you may anoint those external Parts with *unguent. refrigerat. Galeni.* But do not insist too long in the use of

of Lenitives, lest a Chancr^e arise; but purge off those vicious Humours with *pul. cornichini. pil. cochiae, Rudii, pulver. diagridii, troch. Alhandal, &c.* with or without *calomel.* and if there be required strong Revulsion, vomit them with *infus. croc. metallor. mer. vite,* or with a few Grains of *Turbith minerale.*

The Virulency thus removed, the use of Turpentine comes in request to deterge and heal, which would not be so reasonably admitted sooner, lest through its Heat and Tenuity of Parts it lead down the impure Matter, and burthen the diseased Parts. It may be given to the Quantity of a Drachm, two or three, washed in *aq. plantag. parietariae, &c.* adding a few Grains of *Camphire* to it; or you may add Purgatives to it, viz. *pul. rad. jalapii, trochisci Alhandal. diagridii, &c.* Or, Rx *terebinth. lot. in aq. plantag. 3j. acidi tartari 3j. corn. cervi usci. ocul. cancror. diagridii an. 3ls. f. Bolus.* Or, Rx *terebinth. Venet. lot. in aq. ros. rub. 3ij. tartari vitriolati 3ss. salis succini, rhab. pul. an 3ls. cum pul. glycyrrhiz. f. Bolus.* And in its more Decrease Rx *salis prunellæ 3ij. crem. tartari 3vj. camphoræ 3j. terebinth. Cypræ. 3jss. sumat. ad quant. castaneæ mane & vesperi.* In case of Relapse, add *pul. rad. jalapii* to it.

At this Time, Clysters of *terebinth.* are proper, which in the time of its Virulency would be mischievous.

If by some of the foreaid Medicaments, the *Gonorrhœa* be not perfectly cured, you may prescribe Astringents. The time of giving them is in the very Declination of it, when there only appeareth a little thin waterish Humour, which glueth the Entrance of the *Urethra.* If you give them sooner, you may stifle in the Matter, and raise a *hernia humoralis.* The Astringents usually perscribed are, *Bol. armen. sang. dracon. mastich. corn. cervi. usci. os. sepiæ, croc. mart. astringentis, troch. alkekengi, &c.* made into Pills: viz. Rx *succin. mastichis an. 3ij. sang. dracon. lap. hematit. coral. rub. an. 3j. balauſt. sem. plantag. an. 3jss. croci martis astring. 3j. pulveriz. omnia, & cum bals. Peruviano & syr. cydon. f. massa pilul. dos. 3ss. ad 3j.* After which the Patient may drink a Draught of the following Decoction: Rx *follor. polygon. millefolii an. Mj. rad. althææ, nymphææ, an. 3j. flor. ros. rub. papaver. rhead. an. Pj. sem. quat. frig. maj. an. 3ij. sem. plant. portulac. lactucæ an. 3j. sem.*

sem. hyoscyam. papaver. albi an. 3iv. baccar. myrt. smach sem. halicacabi an. 3ij. f. decoctio. in s. q. aq. fontis; colaturæ adde syr. cydon. de rosis fccis.

I. Observation of Gonorrhœa.

If after the Gonorrhœa be cured, you suspect you have not enough secured the Patient from the Malignity of the Disease, you may purge him with some of the fore-mentioned Catharticks with Calomel, after which you may proceed with Sudorificks; as hath been shewed in the former Observations.

One came to me, complaining of a Heat in his Urine, with a Suspicion of a Gonorrhœa, contracted, as he supposed, the Night before. Upon View of the Penis, there appeared a Redness on the End of the Glans, and he crush'd out a Moisture like Matter. I concluded it a Gonorrhœa, began the Cure without Delay. In the first place I let him blood, and some Hours after administer'd a Clyster. I prescribed him that Night a Barly-cream for his Supper, and in the Morning purged him with Manna and Cremor Tartar. in Whey. The next Morning the Gonorrhœa appeared visibly, and his Linen was much-stained with the Matter. We repeated the hordeat. that Night, and prescribed him 3j. calomel. iij. sif. cichor. 3ss. ms. which he took early in the Morning, and about three Hours after a Draught of the decoct. tamarindor. &c. as it is prescribed in the Method of Cure, and some Hours after that drank so much more of the Decoction, by which he was well purged. That Night I laid him to rest with an anodyne Draught. The next Morning I found the Gonorrhœa increased, with Heat in Urine and painful Erections. I repeated the former Apozeme, and to prevent Erosion, I injected the decoct. hordei, as is above-mentioned, and repeated at Night the anodyne Draught: But finding the Accidents still to encrease, I prescribed him the Morning after calomel. gr. 15. turbith. gr. 6. with cons. ros. in a Bolus, with a Draught of Posset-drink after it; and in case he vomited, to drink Posset-ale after each Vomit. But he had formerly taken much Mercury, and this Dose moved him little. A Clyster was administer'd that Afternoon, and at Night an Emulsion ex sem. canabin. &c. which he had liberty to drink as often as he pleased in the Night. The second Day after I repeated turbith. min. The next Morning I perceived a Remission of Pain, &c. which

which I imputed to the mercurial Dose, and would gladly have repeated somewhat of that kind; but to avoid fluxing, I purged him the next Day with *pul. cornichini*; it worked plentifully. I repeated it again the next Day with *Đj. calomel.* and at Night he drank the Emulsion as before. Thus the Virulence and Accidents were checked. From that Time I purged him with that Electuary of *sal. prunel. cum terebinth.* but observing it to run again, I added *pul. jalapii* to it; and by the repeating that, and afterwards the same Electuary as it is prescribed without Jalap, I cured the *Gonorrhœa*.

I was sent for to a Man grievously afflicted with a 2. *Obser-*
Stranguria. He had been let blood, and purged with *vation.* Lenients; he had also drank Emulsions, and bathed often in a *semicupium*, but without Remission of Pain. Upon this Information, and Assurance that he had not the Stone, I suspected it might arise from some *Gonorrhœa* suppressed, but he would by no means acknowledge that. However, I gave him early next Morning *Đj. calomel. cum cons. cicchorei* in a *Bolus*, and a Clyster that Afternoon. It gave him three or four Stools. That Night I prescribed a Draught of Emulsion. The next Morning I found him much relieved. I gave him alternately two Doses more as at first, with Clysters in the Afternoons, and continued the Use of Emulsions, and thereby freed him of the *Stranguria*. About two or three Days after he came to me, and shewed me a *Gonorrhœa* weeping. It had been too soon stopt by Astringents, and that caused the *Stranguria*, which now returned again, but with no great Malignity. I purged him with the Electuary *ex terebinth. sal. prunellæ cum pul. jalapii*, and afterwards I confirmed the Cure with the same Electuary *sine jalapio*, and the *decoct. milfolii*, &c. casting up an Injection at last of a Solution of *mel. Ægyptiac. in aqua equiseti*: By all which he was cured.

One came to me diseased with an involuntary Effusion of Matter; it seemed to me a Venereal *Gonorrhœa*, 3. *Obser-* but he having consulted others, who thought it arose *vation.* from some scorbutical Affection, I advised him to put himself into their Hands, my Knowledge extending only to the Cure of the Venereal one; and supposing it to be so, yet I could not hope to cure it in so few Days as they had promised him. Thus we parted, but after a longer

longer Trial with them than was promised, he returned to me again not better than at first. Upon which Consideration I undertook to serve him as well as I could. He had been sufficiently treated with lenient Purgatives. I began with a Dose of *pul. cornichini*, which purged him at least fifteen or sixteen times. That Night I disposed him to rest with an anodyne Draught. The next Day he was less pained in making Urine, and the Running was lessened. Upon which account I purged him more moderately, but that way of lenient purging gave way to the Increase of the Virulency; which being also observed by the Patient, I purged him with more large Doses, and those of the stronger Catharticks, *viz. pil. Rudii* with *calomel.* and sometimes with *pul. cornichini*, or the Electuary *ex terebinth. cum jalapio.* By the use of this last I purged off the *Gonorrhœa*, and stopt the Running by some few Doses of *pil. croci martis astrigentis.* He continued well about a Month, then it relapsed again. Upon sight whereof I repeated the former Course, and stopt it; yet it broke out afterwards seven times for the Space almost of a Year. I cured it as often, by purging him with the Electuary *cum jalapio*, so that it continued well at last. Whether it was Venereal at first, I cannot affirm: Nay, so far as I could judge by his Habit of Body and Manner of Living, he was not that way inclined; but what way soever it proceeded, he was perfectly cured, and continueth so.

4. Observation.

I was commended to a Patient who lay much afflicted with a virulent *Gonorrhœa* accompanied with the severest Accidents, *viz. Priapismus*, with Contraction of the *Penis, Stranguria, &c.* insomuch that he was necessitated to rise often in a Night to cool himself. He had been in such Hands as had purged him and let him blood. I began with a Clyster, and the next Morning gave him Lenitive Electuary, *diaprun. &c.* with the Addition of *calomel.* and bathed him that Day, and prescribed him Emulsions, and prosecuted the foresaid Method of bathing and purging four or five Days with little Remission of the Accidents. Wherefore I left off bathing, and prescribed him gr. *iij. mer. vitæ* in a Pill, which vomited him much and purged him. I disposed the Patient

tient to rest the following Night with gr. jfs. *Laudan.* *aq. cinnam. bordeat.* & *aq. papaver. cum syr. paralyseas.* The next Morning I prescribed him an Emulsion made with Chicken-broth, as well to nourish him as temperate the Acrimony. I also repeated emollient Clysters, such as have been set down in the Method of Cure. Having thus somewhat refreshed him, I prescribed him *calomel.* *Đj. turbith. min.* gr. iv. which vomited him twice that Day. I kept him to Chicken-broth and Clysters, and at length, repeating these Mercurials, I freed him of all those Accidents; and with the white Electuary *ex terebinth.* *cum pul. jalapii* I purged off the *Gonorrhœa*, and with the other *ex terebinth.* the astringent Pills, and *decoct. lig. lentiscini cum rad. bistortæ, consolid. tormentille,* &c. I concluded the Cure. This very Man was the most severely afflicted with the foreaid *Gonorrhœa* I ever saw; yet some Years after was again clapt, and passed under several Hands, till the Malignity spread it self all over his Head, Face, and Body, and was at last cured by me.

One of about thirty Years of Age, of a full Body, came to *s. Obser-*
Town diseased with Caruncles, intending to be my Pa-*vation of*
tient; but within a Day or two after he came to me with a recent *Gonorrhœa* contracted the Night before. I began the Cure that very Instant by letting him blood, and pre-*Gonor-*
scribed a Clyster that Afternoon, and prosecuted the Course by Emulsions and Purging. But the Patient being irregular, the *Gonorrhœa* became highly virulent, with all the Accidents of Pain, &c. and whilst he was purging with *pul. cornicchini* and *calomel.* a Chancre appeared between the Prepuce and *Glans* very big and hard. He pretended it rose that Night. I gave him the next Morning a Dose of *Turbith min.* which vomited him five or six times, and purged him twice. I dressed the Chancre with a Pledgit dip'd in *lac sublimat.* I repeated the *Turbith* the third Day, and afterward again, till I salivated him, I thinking that way the most speedy in such Libertines. During his salivating, an Artery among the great Teeth on the right Jaw burst forth, and bled very much before I had notice of it: I stopped it by directing him to hold the Yolk of a hard roasted Egg between his Jaws close upon the Place where I suspected the Ar-*tery*

terry to lie, and so by Compression restrained the Bleeding. The next Day I set him in a clear Light, and discovered the Blood to arise by a carious Tooth, which I stopped with Lint dip'd in *ol. vitriol.* so that it bled no more. During the Salivation the Chancre resolved and the *Gonorrhœa* stopped. In the Declination of the Salivation I purged him with the bitter Apozeme, and afterwards finished the Course with *decoct. sarsæ, &c.* sweating him. Whilst he was in this Course of sweating, the *Gonorrhœa* appeared again weeping, but the Malignity being wasted, I cured it with the white Electuary and astringent Pills.

6. Observation of a Gonorrhœa with Chancre. One of about twenty three Years of Age came to me with a *Gonorrhœa*, accompanied with Virulence. I advised him a Clyster that Evening, and the next Morning let him blood, and prescribed him a laxative Ptisan

(as it is set down in the Method of Cure) to purge him moderately, which he took and repeated three or four Days, taking 9j. *Calomel* every other Night. During which I prescribed a lenient Injection of *Summitat. malvar. violar.* decocted in *aq. hordei.* Those Accidents of Pain thus mitigated, I purged him with *pul. cornicthi.* and *calomel.* and after its Operation I prescribed him an Emulsion *ex sem. canabini, &c.* and repeated the Use of the Purgative and Emulsion, till I had taken off the Virulence. Then I sent him a Pot of the white Electuary *ex terebinth. jalap. &c.* and a Draught of the Emulsion after it each Night. During this Course, the Patient supposing himself secure, took his Liberty abroad in eating and drinking, till a great Inflammation happened on the Prepuce, with a Swelling and Excoriation of the *Glans*, also a large Chancre between the Prepuce and *Glans*: Upon Sight thereof I let him blood, and fomented the Prepuce with *decoct. summitat. rubi, plantag. &c.* and dressed him up as is usual in such Cases, and gave him 3ij. of *manna* with *crem. tartar.* next Day in a Draught of Posset-drink. It purged him seven or eight times. The second Day after I prescribed him a Dose of *Turbith*, and a Clyster that Afternoon, and afterward proceeded in the repeating *turbith min.* and raised a light Salivation, by which the Hardness was resolved, and the Chancre cured. After which he drank

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a Decoction of *Sarsa*, and observed a strict Diet, and sweat, as hath been said in the like Cases. After I had thus cured him, a Weeping of the *Gonorrhœa* appeared again: It was no more than I expected, it commonly following after such Courses of Phyick; but there being no Malignity in it, the Cure was soon effected with that white Electuary *cum terebinth. &c.* and he continued well.

A young Woman newly married, complained the 7. *Observation.* second Day after of a Heat in her Urine, which increasing upon her with a *fluor albus*, I was sent for, and heard her Complaints, and saw some Linen she had worn, much stained with Matter. I advised her to bathe the excoriated Parts with Milk and Water, and to dress them with *unguent. refrigerant. Galeni*, prescribed her an emollient Clyster, Emulsions, &c. and took my leave, without discovering to her the Nature of her Disease. A Day or two after I took an Opportunity to acquaint her Husband with what I had observed of his Wife's Condition, and question'd his Health. After a little Demur, he told me had, some Months past, a *Gonorrhœa*, and supposed he had been cured; but of late, since the Complaint of his Wife, he had observed some little Weeping, and shewed me somewhat like the Relicts of a *Gonorrhœa*. It was inconsiderable, yet seemed enough to infect her. He put himself into my Hands, and recommended her also to my Care. I let them both blood, and purged her with a laxative Ptisan of *Cassia, tamarind, &c.* and sent her an Injection of a Solution of *lap. medicam. Crollii in aq. plantag.* a Drachm to a Pint, and continued the Use of Emulsions, and afterwards bathed her some Days in a *Semicupium*, and kept her Body soluble with lenitive Bolus's, to which I added ten or twelve Grains of *præcipitat. alb.* After I had thus contemperated the Heat, and healed the external Excoriations, I purged her with *diagridium* and *præcipitat. alb.* some Days, increasing the one or other, and sent her *decoct. summitat. rub. equiset. plantag. &c.* with a Solution of *unguent. Ægyptiac.* these Parts requiring powerful Dryers. After I had thus purged off the Malignity, I prescribed her the purging Bolus of *terebinth. cum pul. jalap.* and afterwards confirmed the

Cure with Astringents, as in the Method of Cure hath been set down. Her Husband was cured by purging with the aforesaid Electuary.

They have both enjoyed their Healths well since, and have Children.

8. Observation.

Whilst I was curing one of a *Gonorrhœa* by purging, &c. and thought I had cured him, a Tumour rose in the left Testicle. Upon Complaint of it I sent for a Truss, and the while let him blood in the Arm, and made up a Cataplasm of *far. hordei* & *fabar.* with *Oxycrate, mel. commune,* and applied it. That Afternoon a Clyster was administred, and the Use of the Cataplasm was repeated twice a Day; during which he was purged with *diagridium* and *calomel.* by the Help whereof the Tumour in the Testicle diminished daily, but by the Sharpness of the *Acetum* the *Scrotum* was heated and blistered in several Parts. Upon Sight whereof I directed some Vinegar to be prepared with Litharge, and made up a Cataplasm with it instead of the Oxycrate, and applied that, defending the Vesication with Pledgits of *unguent. alb.* By this Cataplasm the Humour was dried up, and the Testicle restored to its natural Tone; but the *Gonorrhœa* discovering itself in the mean time, I purged it off as is abovesaid, and concluded the Cure with the white Electuary and astringent Pills: the Patient drinking a Draught of *decoct. lig. guaiaci, lentisci,* &c. after it.

9. Observation.

One about eighteen Years of Age was afflicted with a Swelling in his right Testicle, with Inflammation and Hardness. I supposed it venereal, and risen from a Suppression of a *Gonorrhœa*, but he denied it. I let him blood, and sent for a Bag-truss, and the while prescribed a Cataplasm *ex farin. bord. & fabar. an. ʒvj. pul. summitat. absinth. flor. sambuci & chamæneli* decocted in *Oxymel:* It was applied, and retained close on by a Bag-truss. By the Application of this Cataplasm a few Days, the Tumour was removed, and restored to its natural State; but before this Tumour was quite resolved, I took occasion to look upon the *Penis*, and saw it running, yet the Patient persisted in the denying it; but before I prescribed him ought in order to the Cure, it was more demonstrable, and he acknowledged it.

I purged him with *extract. Rudii & calomel.* four or five Days, and afterwards with that Electuary *ex terebinth. cum jalapio*, by which I purged off the venomous Matter, and with Clysters of *terebinth.* and astringent Pills, I cured him.

A young Fellow was brought to me, having a great ^{io. Observ.} Inflammation and Swelling in his right Testicle; he acknowledged that it arose upon the Cure of a Gonorrhœa: I let him blood, and sent for a Bag-truss, and the while prescribed an atiodyne Cataplasm *ex foliis hyoscyami decocted cum pul. flor. ros. rub. croco, axung. porcin. medul. panis tritic. cum vitell. ovar.* which was applied and kept on with a Truss. The next Day a Clyster was administered, and the Dressing repeated. The Day after he was purged with $\vartheta j.$ of *Calomel.* in a lenitive Bolus. We continued the Application of the Cataplasm till the Inflammation and Pain relaxed. Then made up a Cataplasm *ex farin. fabar. bord. &c.* as in the former Observation; and from that time I purged him with *pil. coch. min. & calomel.* and supplied him with a Box of the same Pills, and a Pot of that Cataplasm to dress himself, and he finding himself well mended, removed to his former Lodging, and rambled about his Affairs. Fifteen or sixteen Days after, when I thought he had been cured, he came to me with a callous Chancre on one Side, between the *Glans* and *Frænum*, the Tumour *in Scroto* being resolved. I confined him again to his Lodging, and purging him daily with the foresaid Pills, increasing and decreasing the Mercury or Cathartick, till I totally resolved the Chancre. Then with *decoct. guaiaci* and Sudorificks I concluded the Cure.

A Man being diseased with a Gonorrhœa put himself ^{ii. Observ.} into some Hands for Cure, but whether through Irregularity in the Patient, or that they were too hasty in the Use of Astringents, however so it happened, that upon the stopping of the Gonorrhœa, a Tumour arose between the Testicles, but it especially affected the left Testicle, and the *Perinæum* with great Inflammation and Hardness. I let him blood, and advised a Clyster, and prescribed him a Cataplasm *ex summittat. hyoscyami, cicutæ, althææ, flor. cham. sambuci, sem. lini, &c.* The next Day I purged him with *Manna & Crem. Tartar.* in

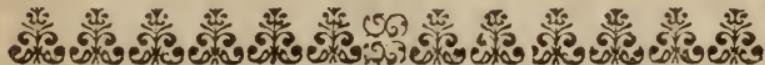
a Draught of Posset-drink, and the Day after prescribed him twelve Grains of *Turbith min.* which vomited and purged him well. By repeating of the same Dose once in three or four Days, and by the continued Application of the Cataplasm I resolved the Tumour which threatened the Welfare of the Part ; the Suppurations in these Tumours commonly leaving an Opening into the *Urethra*, which is difficult to agglutinate. After the Resolution of the Tumour the *Gonorrhœa* returned. It was cured by that white Electuary, which is purging, and hath *Diagridium* in it. During which he drank this following Decoction: Rx *Lig. guaiaci* ʒij. *lentisci* ʒiv. *skinæ nodosæ* ʒij. *sassafr.* ʒj. *raf. corn.* *cerv. eboris,* an. ʒvj. *santal.* *rubri* ʒj. *rad. tormentillæ,* *bistortæ,* *consolid.* *maj.* *Ireos Florent.* an. ʒjs. *passular.* *maj.* *enucleatar.* ʒij. *lig. cassiæ,* *calam.* *aromat.* an. ʒij. *liquiritiæ Hispan.* ʒj. *infundantur,* & coquantur in suff. quant. aquæ fontanæ ad ℔vij. colat. adde *sacchar.* *rosat.* q. s. ad dulco-randum pro usu.

12. Observation of a sinuous Ulcer in the right Testicle.

A young Fellow having long suffered with a *Hernia humoralis*, which had apostemated and broke out on the Outside of the right Testicle, and having passed through negligent Hands, was at last, as an Object of Charity recommended to me by Dr. *Walter Needham*. I looked upon the Tumour, and made a Search into the Ulcer, and informed my self that it was not only sordid, but sinuous from the Production to the lower Part of the Testicle ; but he would not acknowledge that it arose from a *Gonorrhœa*, or upon any venereal Account. He was hypochondriack, and importuned me earnestly to cut off both his Testicles. Whether it was in Despair of their Cure, or as a Punishment for their Offence I know not ; but he told me, it was to that Purpose he came to me. I seeing him so resolute, advised him to come such an Hour the next Day, and I would prepare for him. He came and persisted in the same Resolution to have them both cut off. I having made Dressings ready, as for the Work, began with the ulcerated Testicle, passing my Director in the *Sinus*, bending it downward, and cut that Sinuosity open the whole Length, then passed in my Probe-scissors to the *Sinus* upward, and divided that, and by this Open-

ing

ing he began to shrug, and, being made sensible of the Pain, was well contented, that I should dress him up, and cure the Testicle. I complied, and dressed up the Ulcer with Dossils dip'd in Precipitate, and applied between the wounded Lips *pul. Galeni cum albumine ovi.* but the Blood burst forth so forcibly after I had bound it, that I was necessitated to dress it again. I did so with Dossils dip'd in the Royal Styptick, and from that Instant it bled no more. The second Day after I took off the Dressings, and seeing the Ulcer sordid, I dressed it with Deteratives, and having thereby in a few Days disposed the Ulcer to cure, I purged him with *pil. cochiae min. & calomel.* and left the finishing of the Cure to my Servants, who performed it accordingly.



C H A P. VI.

Of the ill Consequences of a Gonorrhœa imperfectly Cured.

IN the preceding Chapter of a *Gonorrhœa* I shewed *The Consequences of a Gonorrhœa.* you the Accidents that Disease is subject to in its Recency; I shall now declare to you the sad Consequences that attend it in its seeming Declension, when it is left imperfectly cured, and is, as some of those Blades call it, a Weeping, only a Weeping, not worthy the keeping Chamber.

From which Neglect of Cure, those Seminals from whence the *Gonorrhœa* issued, are rendered more lax, and, in Progress of Time, the Matter fermenteth upon the old Leaven, and becometh much more acrid and malign, discharging a Matter, as at first in the Nature of a *Gonorrhœa*, heating and corroding the *Urethra*, from whence Caruncles do frequently arise, and are attended with many ill Consequences, of which I shall give you a Relation, and begin it with that of a Caruncle.

Caruncles. Caruncles are a sort of loose Flesh arising in the *Urethra* frequently in the time of a *Gonorrhœa*, by reason of the Erosion made by that virulent acid Matter; but if that *Gonorrhœa* be well treated, the Erosion is cured, and those little Grains of Flesh dried up. However their Growth is then so small, as they are rarely taken notice of till the Declining of the *Gonorrhœa*, and then a small Weeping, with a few Rags appearing in the Urine, gives the first Suspicion of them.

If this Matter be not timely dried up, the Caruncles increase, and a Difficulty of Urine gradually succeedeth, and it cometh forth forked, or in a small Stream dribbling; but this happens in some People not till many Years after the *Gonorrhœa*; for they arising from a dry membranous Part do grow slowly (and do sometimes waste of themselves, or are washed off by the Urine) upon which Account that Trouble in Pissing, happening sometimes many Years after a *Gonorrhœa*, gives them occasion to suspect that it ariseth from Gravel; and as the Disease increaseth, it is thought the Stone; but by a searching Candle a more certain Discovery is made, those Caruncles being to it so many Rubs in the way.

Carnosity. If at this time their Cure be neglected, some Drops of Urine, or, *in coitu*, the Seed remaining amongst these Caruncles, heateth the Part, and increaseth their Growth, and not only renders them callous, but at length the whole *Ductus*, and then it is called a Carnosity, which straitning the Passage, stoppeth the virulent Matter in its Motion, whereby it is forced back to the Seminals, in which Case the Testicles for the most part do suffer: But if it be the *Vesiculae Seminales* or *Prostates* which are oppress'd, they inflame, and, by Adhesion to the neighbouring Parts, pass their Matter that way, sometimes through the Tunics of the *Intestinum rectum*, and then the Matter is discharged by Stool; or it may be, the Matter passeth through or near the *Podex*, and then it is supposed a *Fistula in ano*, and this way the Urine is sometimes discharged with it. These are the Ulcers which render *Fistulae ani* scandalous. If the Matter passeth *in perinæo*, for the most part it perforates the *Urethra*, sometimes like a Flute, and the Urine cometh thereout, other times it corrupteth within, and dischargeth the Putrefaction into the *Felvis*.

Whilst

Whilst the *Urethra* is straitned with a Carnosity, the Urine is frequently suppress'd, and then the Bladder, endeavouring to disburthen it self, becomes subject to Fluxion, and groweth sometimes carious, and of a strange præternatural Shape, stretching out of the *Pelvis*. In the opening such a diseased Body, I saw the Bladder adhering close to the upper Part of the *Os pubis*, and that Part of the *Peritonæum*. In another there was frequently discharged a Matter with the Urine not unlike corrupt Seed.

One riding a Journey was hurt by the stumbling of his Horse, and became so indisposed, that he was brought back to Town. Physicians and Chirurgeons were consulted, and supposed him bruised internally. They let him blood, and treated him accordingly, but without Success. The Day after I was fetch'd to him, and found him labouring with great Oppression, Shortness of Breath, Fainting, &c. I viewed his Body naked, and endeavoured to inform my self of his Bruise, but there was no Symptom of any. I seeing he was not likely to recover, took my leave, and desired a Servant of the House to give me notice of his Death. He died that Night, and I went the next Morning and opened his Body. All the *Viscera* were found, and no Blood extravasated; but within the *Pelvis* I saw a great Quantity of purulent Matter, like that which issues forth in a *Gonorrhœa*. I divided the *Os pubis*, and opened the *Pelvis*, and saw near the *Prostates* a Bag broken, which I concluded to be one of the *Vesiculae seminales*. Upon Search into the *Urethra*, I found he had long been dis-eased with the Relicts of a *Gonorrhœa*, viz. Caruncles and Carnosity.

The female Sex do also extreamly suffer upon the same Account, the corrupt seminal Matter frequently excoriating the *Pudendum*; whence Excrescences of all sorts do arise, and the sharp Matter dropping from the Matrix, frets and ulcerates the external Parts of the *Labbies*, &c. An Instance of this sort you may see in some of the following Observations.

The *Vagina uteri* is also sometimes excoriated, and Excrescences frequently grow there of great Bigness, one whereof I took off very large of the Shape of a Mulberry.

In others I have seen the *Vagina Uteri* much ulcerated, and discharging great Quantity of foetid Matter, with Pain and Inflammation. The *Alæ* of the *Pudendum* of one were gangrened; but I removed that, and cicatrized several of the Ulcers, but one Ulcer within the *Vagina* corroded into the Bladder, and a Mortification followed, and put an end to her Misery.

Another, upon a Suppression of that corrupt seminal Matter, was seized with a *Disuria*: The Cause not being discovered, the Kidneys were blamed. The Disease increasing to a *Stranguria*, a Stone in the Bladder was supposed. I was fetch'd to make a Search, but felt none. The Accidents of Pain, Inflammation, &c. increasing, she died. I opened her Body, and saw the Bladder, *Vagina Uteri*, & *Intestinum rectum* all gangrened: The *Musculi Lumbares* and those of the *Abdomen* looked as if they had been parboiled; the rest of the *Viscera* were reasonably found.

As from a Suppression of that malign Matter Apostemations do arise between the interior Tunics of the *Vagina Uteri*, so I have sometimes met with schirrous Tumours, which I have sometimes palliated by Antivenerals, when they were thought Cancers. All these Mischiefs increased to such Height through the Ignorance in them that treated them.

Thus I have given you an Account of the several Symptoms as they arise one upon the Neck of another, by which you may distinguish how they differ.

The Cause of them is also apparent, that they arise from a *Gonorrhœa* ill-managed.

The Signs of Caruncles I have also shewed you are discoverable by a searching Candle, they lying in the way, give a Stop to the Candle in its Motion to the Bladder. Yet let not that make you over-confident, that there is no Stone in the Bladder; for it frequently happeneth that there is also a Stone therein; therefore you ought to inform your self of the peculiar Symptoms of that Disease before you oppose it. For so also from that Stone a dribbling of the Urine is common, and in case of Pain the Urine cometh forth forked, and in a small Stream: But in Caruncles it cometh forth more forcibly than in those of the Stone, and they make much Urine

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at a time, and are in Ease after they have urined, which doth not happen in the Stone.

A Carnosity hath the same Signs that Caruncles have; but the Urine being more straitened by the Carnosity, maketh the Symptoms the more severe, insomuch as there is frequently a Pain in the *Glans*, and in straining hard to urine, there accompanieth it sometimes a *Prolapsus Ani*, which are especial Signs of the Stone in the Bladder. But the preceding *Gonorrhœa* and Symptoms of the Caruncles will sufficiently guide you in making the Distinction between them two. To distinguish the Abscesses and Ulcers in *Ano* attending this Disease, from those which arise from the Hemorrhoids, the Treatise of *Fistulæ Ani* will instruct you.

The Extirpation of Caruncles is no easy Work, and *Prognostick.* if there be a Carnosity joined with it, the Cure is much more difficult. And so accordingly as there are other Symptoms complicated with them, so much more is the Disease rendred deplorable and difficult to cure.

In the Cure of this Disease the same Method ought to *Cure.* be observed in Diet which hath been delivered in the Cure of a *Gonorrhœa*; also Evacuations by lenient Purgatives; at least you ought to begin with such to prepare the Body; as Rx *Hordei mundati* ʒij. rad. graminis, *polypod. querc. filicis fæm. an. ʒiv. scolopendrii utriusque, cichorei, endiviæ cum toto, adiant. hepaticæ, an. M. j. cort. radic. cappar. mediani fraxini, tamarisci, an. M. ss. passular. maj. enucleat. ʒiv. liquiritiæ ras. ʒj. sem. anisi, fœnic. an. ʒls. coq. in sufficien^t quant. aq. font. ad libij. colatura calida infund. per noctem fol. senæ ʒjls. agarici trochiscati, rhei electi, an. ʒij. santal. citrini, cinnamomi, an. ʒij. f. iterum expressio mediocris, & clarificetur cum succo limon. & gutt. aliquot vitrioli. In colaturæ ʒxvij. dissolve tremoris tartar. ʒij. syr. de spina cervina ʒij. syr. ros. pallid. ʒj. f. Apozema. With this, or such like, you may purge them five or six Days, and let them blood if you see cause. Emulsions and contemperating Juleps may also be of use to mitigate the Heat of Urine. Vomits are also of great Use for Revulsion, and those of *Turbith* I have always observed to be most efficacious. All the Antivenereals prescribed in the Cure of *Lues Venerea* are proper here, we being indeed*

indeed often necessitated to salivate by Unction. After which drying Decoctions and Sudorificks are proper as aforesaid, with Purging; and after all we conclude the Cure with such as have vertue to heal and fortify the relaxed Seminals, of which sort these following are:

R Fol. menthae M.ijj. millefolii, plantag. equiset. an. M.ij. sem. quat. frigid. maj. confus. an. 3ij. sem. plantag. acetosæ, agni casti, cannabis, papaver. albi, an. 3ss. terebinth. Cypr. 3vj. sacchari albis. Itj. lactis recent. C.ij. f. distillatio.

R Gum. guaiaci 3ijj. terebinth. siccata. 3ij. rad. bistortæ, tormentillæ & nymphæ pulv. an. 3j. succini, coral, rub. margarit. lap. Gagati, ocul. cancrorum pul. an. 3iv. camphoræ 3ss. terebinth. Cypr. q. s. f. massa pilular. capiat. 3ij. mane & hora somni, superbibendo 3ijj. vel iv. aq. superscriptæ. Or,

R Rad. tormentillæ, bistortæ, symphyt. an. 3ijj. succini alb. coral. rub. margarit. eboris, cornu cervi usti, an. 3j. gum. guaiaci 3ij. sem. agni casti, cinnabin. papav. albi, plantag. acetosæ, an. 3j. sem. anisi, fœnic. coriand. confect. an. 3ijj. f. pulv. Sumat. 3j. cum laet. 3vijj. mane & vesperi.

R Gum. guaiaci nat. 3ij. mastich. benzoin. an. 5j. merc. dul. sexies sublimat. 3j. bragrisia 3ss. croci 3j. ol. absinthi gut. vj. aloes rosati ad pondus omnium, & cum sufficienti quant. bals. nat. f. massa pilular. de qua capiat 3j. singul. noctibus, in forma Pil. iv.

R Colophonia ex terebinth. Cypr. in aq. plantag. & roj. rub. ad duritiem coct. mastich. granat. select. an. 3ss. gum. animæ pellucidissimæ, gun. guaiaci, bezoini, succini albi, an. 3ij. unguium alcis 3j. bals. Tolutani 3ss. terebinth. e Chio accipienda reliqua, quæ in pulverem subtil. redact. in mortario calido misce, addendo sub finem bragrisia 3j. f. massa pil. ex qualibet 3j. formentur pil iv. & usui reserventur: harum capiat vj. quotidie mane & vesperi, superbibendo hauſt. sequent. decoct.

R Rad. sarsaparillæ 3vj. cort. ligni sancti 3ij. sassafr. rad. tormentilla, ar. 3ss. santali rub. citrini ras. corn. cerasin.

cervin. rhinocerot. flor. anthos an. ℥ss. fol. agrimonii Mij. thæ. chinæ. Mj. rad. liquiritiae ℥ss. maceris ℥ij. f. omnium infus. & decoct. in aq. font. ℥xij. ad tertiae partis consumptionem pro potu ordinario. These were all prescribed by Sir Francis Prujean to several Patients labouring of these Diseases under my Hands.

Having thus offered to you Internals, we shall now proceed to shew you the way of extirpating these Caruncles. The Methods thereto proposed by Authors are various: I shall reduce them to two, viz. the one by Medicaments, the other by mere Force, with Wax-Candles, Probes of Lead, Silver, or Steel, to tear and break them in Pieces.

Whilst the Caruncle is recent, you may by the Compression of a well-proportioned Candle crush it to Pieces, and by the Use of moderate detergent and exsiccant Injections dry and heal the Part: But if there be an issuing of Matter, as in virulent *Gonorrhœa*'s, you must first remove that Matter by Purging, &c. before you can hope to extirpate the Caruncles. Nay, if the Matter should flow much upon the Use of the Candles, you must forbear further proceeding with them, and make Evacuation and Revulsion of that peccant Matter, as hath been aforesaid, and then proceed again in the Work.

In order to the search, you may place the Patient sitting upon the side of his Bed, Chair, or Stool, with his Thighs opened, and his Heels drawn back, so as he do not press upon the *Perineum*. He must also at the same time lean forward with his Body. Then make choice of a proportionable Candle, and having smoothed the End, and a little bended it, anoint it with Oil, (of Lilies if you please) pass it gently in, and move it easily forward, and by the Warmth it gets in the *Ductus* it may ply accordingly with it. If you meet with a Stop, press moderately; it it will not go by, draw it back, and take the exact Distance the Caruncle lieth off, and mark it with your Nail, then anoint it with Oil, and pass it again into the *Urethra*, and when you come at that Stop, raise the *Penis* with the other Hand; if it will not pass over that Caruncle, try another Candle made taper at the End: But if you be satisfied that it passeth beyond the

the Caruncle, it is a good Sign, pull it out again; and if the Parts be heated, you may inject decoct. hordei, &c. and prepare your Candles for the consuming the Caruncle. The Medicaments I propose thereto are as followeth: Rx cort. mali granat. acid. in umbra siccata. & pulveriz. 5ij. aluminis pulver. 9j. emplaſtri de ceruſſa 3j. misce ſuper ignem. Or, Rx mer. præcipitat. rub. 3j. lap. calamin. 5ij. vitrioli calcinati 3jſſ. empl. diathalcith. 3vj. ad ignem liquefacti. You must ſcrape off the Wax from the End of the Candle, and dip the Wiek in either of the Plaifers whilſt they are ſcalding hot; then after they are cold, ſhape them and ſmooth the Ends for your Use. This following Medicament hath great Credit amongſt Authors: Rx aeruginis, auripigmenti, aluminis rockæ, chalcitidis an. 3iv. Infuse them in ſtrong Vinegar, then grind them upon a Marble very fine, dry it in the Sun, and temper it again with Wine-vinegar to the eighth time, drying it each time till it hath lost much of its corroſive Quality. Rx argenti ſpum. 3ij. olei roſ. 3iv. coq. ad empl. conſiſtentiam, then add of the abovesaid Powder 3ij. it being well mixed, and of a good Conſiſtence, you may dip the bared Ends of your Candles in it for the abovesaid Use. Your great Care in this Work muſt be, that the Emplaſter be of ſuch Conſiſtence as that it adhere as firm to the Wiek as to the Wax, for otherwise it will cauſe vexatious Work. I commonly ſend a Proportion of the forefaid Powder to my Wax-Chandler, who mixeth it with a proportionable Quan‐tity of Wax, and makes me ſo many Dozen of Wax-Candles; which Candles being ſo medicated, do very often ſerve me in wearing off recent Caruncles, and also in cicatrizing the Part.

If the Caruncles be an older Date, and be ſo big and tough, that you cannot paſs with any of the Wax-Candles; forbear farther attempting it, and endeavour by emollient Injections, Embrocations, &c. to ſupple and dilate the Ductus. Rx Rad. Althææ, lilior. an. 3ij. ſem. lini, fænugræci contus. an. 3j. coq. in aq. fontis ad libij. Rx Colaturæ libj. ol. amydg. dul. noviter extract. 3ij. Mſ. Inject ſome of it warm twice or thrice a Day with a Syringe, having a thick blunt Pipe. You may also ferment the Perineum with the reſidue of the ſaid Decoc-tion;

tion ; or he may sit upon a Close-stool over some of the same Decoction ; or *ex radic. & fol. althææ, matric. viol. sem. lini, fænugræci, flor. cham. sambuci, meliloti, summitat. pulegii, origani, &c.* When he cometh off, embrocate the *Perinæum* with *ol. ex pedibus bovinis*, and apply over all some such-like Cerote. Rx unguent. *Agripp. dialth. æsopi, butyri recentis an ʒij. ol. lilior. amygd. dul. an. ʒj. sem. lini, althææ, pulver. an ʒvj. gum. amoniaci ʒij. ceræ q. s.* To which may be added, *Argenti crudi extincti in terebinthina ʒij.* or that Emplaster *ad salivationem*. After three or four Days make Trial again with a proportionable Candle, and if you can pass the Caruncle, take the exact Mark, and pass in a medicated one upon the Caruncle, and leave it remaining there, cut off the End within an Inch, and flat that End ; then turn that broad End over the Top of the *Glans*, and fasten it close with a Linen Rag : You ought to leave him more of the same Candles fitted for his Use, that in case he urine, he may take it out and put in another. Whilst he puts in the Candle, he must stand somewhat stradling, and bow his Body forward ; but as to his Posture, he will make choice of that to his own Conveniency. The best Time to begin this Work may be at Night, the Candle being then likely to stay in its Place without Disturbance. In the Morning, when you draw out the Candle, inject some lenient Decoction, and pass in a white Wax-Candle of a proportionable Bigness to the other you drew out, to make good the Way you have got, and yet to lenify the Heat in the *Ductus* ; but if it be not disturbed, go on as you did to wash the Caruncle.

But if after the Use of Emollients you cannot pass the Caruncle, you may well conclude it callous. In which case you may pass a *Canula* into the *Urethra* to that Caruncle, and whilst you hold that there steady, you may convey a Grain of Caustick into the *Canula*, and pres^s the Caustick to it ; and whilst you hold it there, you will perceive its Operation by the pressing forward of the *Canula*. The Caruncle thus consumed, cast in a Lenient Injection daily ; and if you take Notice of his Urine, you may see the Separation of the Sloughs as Rags in it. After which you may by the common medicated Candles wear away the remainder, and with Injections cicatrize

trize it. But if after the Extirpation of one Caruncle you meet with another behind it, and cannot pass it, nor a *Canula* so far as where the Caruncle lieth, you may then attempt it by the Leaden Probe. Anoint it first, pass it to the Caruncle, then by pressing upon it break it off. You must expect a bleeding, and it is done not without Pain, the *Urethra* being of exquisite Sense; that Pain is sometime accompanied with Rigor and Fever. In order to the stopping of the Flux of Blood, you may inject the Royal Styptick-water with *aq. plantag. ros. rub. &c.* proportionably as you see Cause: Or, in case the Pain be great, beat the White of an Egg with *aq. spermatis ranar.* and inject it. Externally you may apply such like Defensative. Rx *boli Armen. sang. dracon. cort. granat. aurant. myrtil. balauft. pul. an. 3j. acet. ros. 3ij. album. ovor. succor. plantag. equiset. q. s. Ms.* But I never saw any Inflammation or Tumour arise from the Use of these Probes. Fever I have sometimes seen upon the Use of them where there was no Blood shed; in which case bleed them in the Arm presently, and prescribe Clysters, and forbear the Use of your Probes some Days.

After you have torn off the Caruncle, and that the fear of Inflammation is over, you may make a Search, and if the Caruncle be extirpated, proceed in the drying it to a Cicatrix, which may be by a Solution of *troch. albi Rhaf.* in any of the forementioned distill'd Waters, or, as I said, with the Royal Styptick. A proportionable thick leaden Probe of a fit Length and flat Head, rub'd with Quicksilver, is also effectual. Small Probes are apt to be made brittle by the Mercury, and break within the *Urethra*. But if you suspect some Part of the Caruncle remaining, use the medicated Candle, and it will not only waste it, but dry it to a firm Cicatrix.

If there be Carnosity with Caruncles, your way is to dilate and supple it by Emollients, as abovesaid. If a Suppression of Urine happen, a large Clyster suddenly injected up hath frequently forced the Urine out of the Bladder: But if that fail, a Catheter must help you, or an Incision in *Perineo* thro' the Carnosity. If a Flux of virulent Matter be accompanying the *Stranguria*, the last Remedy is Salivation.

If by reason of the long Continuance of the Disease *Abscess.* the *Urethra* be so straitned with the Carnosity and Caruncles, that the purulent Matter cannot pass forth, which often happeneth, when the Urine doth, you may well suspect an Abscess will arise in some Part; which if it happen within, there is Danger of Putrefaction. If the Matter raiseth a Tumour externally, and it do suppurate, yet it commonly leaves uncurable Ulcers. Therefore you ought, upon the least Suppression of this Matter to make Revulsion by Antivenereals; yea, rather than to fail, raise a Salivation, and prosecute the Cure as his Habit of Body and Greatness of the Disease requireth. And the while make way with Emollients to dilate the *Urethra*, or give Vent by Incision in *Perinæo*, timely to discharge the Matter.

The female Sex are not subject to such external Apo-stemations. The Caruncles do not cause Suppression, nor is the *Urethra* so subject to them. Sometimes they happen by a Scalding of the Urine, but they are of easier Cure. Yet the *Pudendum* is subject to Excrencences of all sorts and Figures. The *Vagina Uteri* is also subject to Ulcers, Excoriation, Excrencences and schirrous Tumours, with great Flux of Humours, the *Stranguria*, Inflammation, &c. therefore require your great Care timely to resist them by Antivenereals, *merc. dulcis*, and those milder Preparations being apt to lead the Humours downwards, are not so effectual here as the rougher sort which vomit. How they are farther to be treated by Internals, and each Disturbance removed or alleviated by external Medicaments, you may see among the Observations following.

One of about thirty Years of Age, troubled with a 1. *Observation of a* Weeping and Dribbling in making Urine, came to me. I suspecting Caruncles, made a Search, and found two *Caruncle.* little Rubs in my Way, and behind the Testicles *in Perinæo* met a full Stop, which the Candle would not pass; upon which I drew it out. He had been purged sufficiently by other Hands. I began the Cure with emollient Injections as above prescribed, and fomented and embrocated the *Perinæum*, and after a Day or two I carried half a dozen of medicated Candles, and made another Search, and took a Measure of the Place where the

the great Caruncle lay which made the full Stop, and left him that Candle with others, shewing him how to pass them in, and encouraged him to make use of them in my Absence, and to try what Progress he could make; also advising him to use the Injection before and after the Use of the Candle, and to continue the Embrocation and Plaister as he saw cause. During which his Body was kept soluble by Clysters and healing Decoc-
tions; also balsamick Pills were prescribed. After three or four Days I returned, and found the Patient had passed over the Stop, but he had a little heated the *Ure-thra* by over-doing: I then left off the Use of the Oil in the Injection. He would have injected Milk, but I strictly forbid that, in Consideration of the Mischief I have known it do in curdling in the Bladder. After the Heat was calmed, he used the Candles with more Mo-
deration, keeping the Passage open he had made. One Night, when he was going to Bed, I made him a Visit, and brought with me some medicated Candles, and having first flattened the upper End of one of them, I passed it into the *Urethra*, and turned that End over the *Glans*, and with a soft Linen Cloth over it, bound it close on. He slept with it until towards Morning, then pulled it out and urined. In the Morning I made a Search, and found the Passage open. I injected some of the emollient Lotion, and passed in one of the com-
mon searching Candles, and bound it on as the former, and advised him to keep his Bed, or at least his Cham-
ber that Day, and in case of Urine to pull it out, and inject a *Collyrium* of *aq. plantag.* and *syr. de ros. fccis*, and to put in another Candle the same Night armed as before. By this Method the main Caruncle waited, and the lesser which lay in the way to that, was consumed by the passing and lying on of the same Candles. I feeling no more Rub's left off the Use of the Candles, and sent him an Injection of *aq. plantag. rubi equiseti*, wherein was dissolved a few Grains of *lap. medicament. Crolii*, by which the Relicts of the Excrencences were dried up, as also the Weeping, and the Patient remained cured. Thus by shewing the Patients how to use the Candles, they themselves have sometimes prosecuted their Cures at a great Distance from me with good Success.

One having had many *Gonorrhœa's*, and been frequently under Cure of Caruncles, came to me. Upon <sup>2. Obj-
vation.</sup> Sight of the *Penis* I saw he had an issuing of much Matter, as in a virulent *Gonorrhœa*. I made a Search for my own Satisfaction, and met with several Excrescences, and a full Stop before I reached to the *Perineum*. The *Urethra* was tender, and did not admit the Candle without Pain. I began with the letting him blood, and purged him the next Morning with Whey, *Manna* and *Cremor. Tartari*. After which I bathed him four or five times in warm Water, keeping his Body soluble the while with Clysters, or a Bole of *cassia*, *ol. amygd. dul.* *syr. viol.* and the like. After he had done bathing I gave him twenty five Grains of *mer. dul.* at Night, and a Clyster the next Day, and repeated the *mer. dul.* every other Day, and syringed him with a Lotion of *aq. plant.* with a Solution of *troch. alb. Rhaf.* But afterwards observing the *mer. dul.* not to answer my Expectation, it having, as I perceived, been no Novelty to him, I gave him eight Grains of *Turbith min.* which vomited him three or four times, and gave him half a dozen large Stools, by which I believed the Mercury he had taken before worked downward. I ordered him a Clyster of Milk, *cum vitel. ovor.* that Night to quiet his Bowels, and another the next Day, and the Day after gave him twelve Grains of *Turbith min.* which vomited him four or five times, and purged him twice or thrice. By the repeating of this Medicament twice or thrice, intermitting three or four Days between, I lessened that Flux of Matter very much; but it making his Chaps sore, I purged it off with the bitter Decoction, and put him into a Decoction of *Sarsa*, *lign. lentisc. rad. consolid.* *biflort.* &c. and gave him of that Electuary with *terebinth. sal. prunellæ*, &c. also Clysters of *terebinth.* sometimes at Night going to Bed. Injections of *lap. medicament.* *Crollii* were afterwards used, by which the running ceased. I then made a Search with a Candle, and having maked the main Stop, I proceeded in the use of *Fren:h Candles*, which were made taper fashion, and passed one over the great Caruncle, bound it on, and left it lying upon it, and directed the Patient to take it out upon Occasion of urining, and afterwards to pass it again.

again. By the Use of that there was room made for the Application of my own Candles, which I armed with that Composition of *merc. præcipitat.* &c. and thereby did wear off that Caruncle. Afterwards I met with others which I also extirpated the same way ; and with the Solution of *lap. medicament. Crollii*, and the Use of Leaden Probes, I smoothed and cicatrized them.

3. Observation.

I was sent for one Night to a Man that laboured of a Suppression of Urine, with great Pain about the *Os pubis*. I intended to have passed a Catheter, but saw the Head of the *Glans* hard as a Cartilage, and the Entrance into the *Urethra* so narrow, as I could scarce get in a small Probe. I was at a Loss how to relieve him. I presently caused a large Pint of Milk to be warmed for a Clyster, and syringed it up quick ; and of a sudden the Urine forced its way out in a great Quantity. The Patient supposed himself to have the Stone, but I assured him the contrary, his Disease being Caruncles with Carnosity, no better than the Pox in those Parts, and more difficult to cure than any of the forementioned Species of it. I let him blood that Night, and purged him the next Day with a Decoction of *Cassia*, *Tamarind.* &c. with an Addition of *Manna*, *syr. ros. Damasc.* and afterwards bathed him three or four Days, and then anointed with the mercurial Unction his Legs, Arms and *Perinæum*, &c. by which I raised a Salivation. It lasted about thirty Days, during which he made Urine with more Ease ; yet upon Search I found the Caruncles, but the Carnosity in the *Glans*, &c. resolved. During his salivating I cast emollient Injections into the *Urethra* daily, and afterwards, while he was in his Course of Sweating and Purging, I began to work with the Candles, and made way with little Difficulty till I came into the *Perinæum*, and there I spent some Days in endeavouring to pass a small taper Candle without Success. Wherefore I attempted it by the Force of a Leaden Probe, and brake the Candle off. It bled three or four Ounces, but I stopped it by injecting *aq. spar. ranar.* with a few Grains of *lap. medicament. Crollii*, then embrocated the *Perinæum* and Parts about with *ol. ros. cum aceto*, and applied an *empl. e bolo* over them. The next Morning I found he had not urined much better. I injected again,

again, and passed in a Candle, and perceived that Caruncle eradicated, but I met with another behind which I could not pass: I again used Injections, and passed in a taper Candle, by which I gradually proceeded, and afterwards by armed ones I freed that Passage, and his Urine came away in a full Stream. I prosecuted the Cure with medicated Candles and drying Injections, and continued the Use of sudorifick Decoctions and astringent Pills till he was cured. Yet some while after he came to me again, complaining that there was a Caruncle near the End of the Bladder which hindered his passing the Candle into the Bladder; such hath been the Complaint of others, but that Caruncle was natural.

One came to me having had many Gonorrhœa's, and in his latter Years much Difficulty in Urine. I made a ^{4. Observ.} Search, and found he had Caruncles, and one within half an Inch of the Entrance into the *Urethra*. We agreed upon the Method of Cure, and I was to begin my Work the next Day, but heard not from him till about a Year after. It seemed he had been that while in other Hands, who had proposed an easier Method of Cure, but failed. Yet the urinary Passage was thereby more enlarged, so that the Patient could better admit of the Candles, and was also the more observant to my Rules; but then again there was a Flux of Matter which required to be removed. To which Purpose I began with a Dose of *Turbith. min.* and by the repeating of it made Revulsion, and salivated him. During the Salivation I fomented and embrocated the *Perineum*, and injected emollient Decoctions, and by Candles prosecuted the Extirpation, passed the lesser Caruncle, and afterwards pressing upon the bigger with a proportionable big Candle, I brake it, and permitted it to bleed, and then passed a medicated Candle over that broken Caruncle, and by the Pressure wore that Caruncle off smooth. There was another Caruncle that lay behind this in *Perinæo*, which I also made way over by a taper Candle, and afterwards by the Pressure of my medicated Candles I wasted them. During which he passed thro' a Course of Purging, Sweating, &c. and finished the Cure by the use of Astringents as well inwardly as outwardly.

5. Observation.

A Man who had been long diseased with a weeping Gonorrhœa was commended to me for Cure. By making his Urine and Search, I found that he had Caruncles. I proceeded by Injections and Embrocations to make way for my Candles, and cleared my Passage into the *Urethra* to the *Perinæum*, and endeavoured by taper Candles to make my way over the rest. But the Patient not keeping his Chamber made my Work irksome to me. Whereupon one Morning I took a Candle proportionable to the *Ductus*, and having smoothed one End, I dip'd it in Oil, and passed it readily to the Caruncle, and whilst it was stiff I pressed hard upon the Caruncle to break it, and did so; but at that very Instant the Patient was seized with a Rigour, and in pulling it out the Blood followed. I injected a Solution of *pul. bol. Armen. in aq. sperm. ranar.* and stop'd the Bleeding; but after that Rigour the Patient burned and lay distempered all Night, and in the Morning I found him in a Fever, yet he had no considerable Pain in the urinary Passage. I applied Refrigerants externally to the *Perinæum*, and let him blood, and consulted a Physician. He was brought very weak by his Fever, but recover'd, (as I thank God I never had one died upon this Account.) From that time he would make no more use of Candles, but put me upon the use of Injections, of which I tried many sorts; the best was a Solution of *lap. medicament. Crollii*, by which he made water better, and to this Day enjoys a good Health.

6. Observation.

One about fifty Years of Age, who had laboured long with Caruncles, finding his Urine to come daily much more difficultly away, sent for me. I made a Search, and found a Rub before I had enter'd an Inch into the *Ductus*. I began by purging him with an opening Apozeme of *Cassia, tamarind. rad. gran. &c.* and let him blood, then having relaxed the *Urethra* by Emollients, I proceeded with the Candles, and by Degrees made way till I came to a Caruncle near the Testicles. I endeavoured to pass that with taper Candles, and after some while made way, and applied armed ones for some Days, and wore that Caruncle down, and passed in towards the *Perinæum*, where the Passage was extreamly strait, and a Caruncle stop'd our going forwards. In pressing upon

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upon it, the Patient was immediately seized with a Rigour. I pulled out the Candle whole, and without Blood. The next Day I found my Patient in Bed without Pain or Fever; yet I let him blood, and gave him a Clyster. The Day after I purged him with the aforesaid Apozeme. The next Day I made a Search, and passing a Wax Candle into that strait Passage, he began again to fall into a Rigour. Whereupon I desisted, and contented myself in the making good the way I had gotten, by putting in a proportionable thick Leaden Probe (which had been rub'd with Quick-silver) some Days, which Probe had a flat Head as broad as a three-pence to retain it from slipping in. I repeated the Use of Emollients and mercurial Emplasters to the *Perinæum*, and withal made Revulsion by a Vomit of *Turbith mineral*. and by repeating it I raised a Salivation, which lasted longer than I intended, but it served my Purpose so well as I afterwards made way over that Caruncle in *Perinæo* without Danger, and by armed Candles wasted it. Then with detergent Injections and medicated Candles smoothed and healed the *Ductus*, and left him a free and easy Passage for his Urine, and concluded that Course of Physick with Purgings, Sudorificks, &c.

I was fetched to a young Woman who had been long diseased with a *Gonorrhœa*, and cured thereof, but from the internal Excoriation thereby, the *Pudendum* was overspread with many Excrencences of a spongy soft Flesh, of different Size and Shape. Those on the more external Parts were callous. I prescribed the Injection of *summitat. rubi*, &c. and let her blood, purged her with Whey and *Manna*, and afterwards with the bitter Decoction, sometimes giving her 9j. *calomel*. over Night in a *Bolus* with *conf. boraginis*. Having thus, as I thought, prepared her Body, I began to proceed in the extirpating of the Excrencences, but observing the Fluxion great, I deferred the Work, and made Revulsion by a Dose of *Turbith mineral*. which the third Day after I repeated again, and between while prescribed Clysters and lenient Purgatives, and added *unguent. Ægyptiacum* to the Injections. By this Method I diverted the Fluxion, and began my Work with the cutting off those Excrencences.

crescences in the most external Parts, and eradicated them by Caustick-stone, and *ol. vitrioli*, and so proceeded with one after another as they lay in my way, till I was prevented with the bleeding of them. Then washed the Parts with Oxycrate, and stopped the Blood with Dossils dip'd in a Solution of *lap. medicament.* some Hours after; the Bleeding being stop'd, I rubbed the remaining Roots of them, which I had cut off with a Vitriol-stone, then with a Pair of Scissors or Knife, according as they were seated, cut off the rest, and stoped the Bleeding as before, and from that time consumed the remaining Roots by the Help of the Vitriol-stone, Oil of Vitriol, or Caustick-stone, and appeased the pained Parts with *decoct. hordei, sem. cydonior. &c.* and afterwards cicatrized the Ulcerations, as hath been elsewhere shewed in the like cases. But it was a difficult work, and not effected without *Turbith mineral.* which was repeated often, and afterwards *decoct. sarsæ,* sweating and purging, &c. finished the Course.

S. Observation of a schirrous Tumour in Vagina Uteri.

A Woman of about forty Years of Age, of a full Body, having been some Years diseased in the *Matrix*, as was supposed with a Cancer, consulted me; I made a Search, and felt a hard Tumour on the right Side of the *Vagina Uteri*, of the Bigness of a Pullet's Egg, fixed between the Tunics, neither ulcerated nor painful to the Touch, yet there seemed to discharge much serous Matter from thence. There was also a Descent of the *Uterus.* Upon a farther Enquiry into the Cause of this Tumour, I perceived she had been frequently subject to Diseases in those Parts, and that they were venereal, Upon which Account I supposed this Tumour to be so, and having well informed my self, that the Courses of Phylick she had taken before were upon another Account, I presuming a better Success by Antivenereals, attempted the Cure, and began with Venæsection, taking about eight Ounces of Blood from her Arm. That Day a Clyster was administred, and the next Day I purged her with *elect. diacassie cum 3j. calomel.* and afterwards repeated *calomelanos* three or four times, every other Night 3j. with *conf. ros. rub.* and prescribed her an Emulsion *ex sem. quat. frigid. maj. cum sem. papaver. alb. &c.* in a Decoction of *Sarsa*, aromatizing it with

aq. cinamomi hordeat. and sweeten'd it with Sugar. I also prescribed this Injection: Rx Fol. plantag. virg. aureæ, alchimillæ, an. M. j. summit. centaur. utriusque, an. P. j. rad. iridis ʒij. coquantur in *aq. fabror.* ad ℥ij. colaturæ adde syr. de rosis siccis, & de pilosella, an. ʒij. injiciatur mane & vesperi. Afterwards observing that the *calomel.* did work downwards, and rendered the *Pudendum* more slabby, I gave her a Dose of *Turbith min. ðs.* which vomited her four or five times, and purged her as often. I repeated it the fourth Day, and perceiving the Revulsion it made, I increased the Dose, and gave it the third Day after, and again till it salivated her, and thereby took off the Fluxion and Pains. In the declining of her Salivation, I put her to the drinking of a Decoction of *Sarsa*, and purged and sweat her with *bezoard. min. gum. guaiaci, &c.* and by a strict Diet concluded the Course, and resolved that Tumour as she then thought. Whether it totally discusseth I know not, but she hath continued since very well.

A Man, aged about fifty Years, by the Suppression of Urine and virulent Matter was gangrened on the right Testicle, and that Part of the *Pærinæum* lying next to it, the Urine passing thereforth. I scarified the gangrened Parts, washed out the Blood with Salt-water, fill'd the Incisions with *merc. præcipitat.* and dressed it up with *unguent. Ægyptiacum* hot, with a Cataplasm over all of *medul. panis triticeæ, pul. summitat. absinth. scordii, &c.* decocted in Brandy-wine, I then let the Patient blood, prescribed him a Clyster and a Cordial Julep. The next Day I saw the *Eschar* separating in *Perrinæo*, and was satisfied that the Urine came all that way. I fomented with the *Fotus* prescribed in the Chapter of *Gangrene*, and dressed it with *unguent. basilicon,* and a few Drops of *ol. tercynth.* mixed with it, and continued the Use of the Cataplasm. By these Applications the Slough separating, I deterged with *mundif. Paracelsi.* and purged the Patient with *elect. lenitiv.* and *calomel.* and prescribed him a Decoction of *Sarsa.* After Deterior I incarnerd with the same Mundificative, adding to it *pul. thuris, sarcocollaæ, myrrhæ, aloes* and *syr. de ros. siccis,* and with the Vitriol-stone dried the loose Flesh, and cicatrized it with *aq. calcis, &c.* In the time

of incarning, his Urine passed somewhat by the natural way, and at the last it passed better. The Cure was finished by Purging, Sweating, &c. as I am accustomed to do in such Cases. He is since married to a young Woman.

10. Observation.

In the Year 1652. at my Return to *London* from the Battle at *Worcester*, I some while assisted that most excellent Chirurgeon the deceased Mr. Ed. *Molins* in dressing his Patients; amongst which I saw his Practice in the most difficult Cases of this Disease, whereof I shall give you one of his Operations.

An old Fornicator, having been long diseased with a Carnosity which had resisted all Endeavours, and in a manner totally suppress'd his Urine, sent for him; he went, and caused the Patient to be taken out of Bed, and placed upon a Table, with his Legs drawn up, as in cutting for the Stone; he cut into the *Urethra* near the Neck of the Bladder; it was hard as a Gristle. His Knife did not readily divide it; but so soon as he had, the Urine gushed out, which being discharged, he put his Finger into the *Urethra*, and afterwards enlarged the Incision upward more to the *Scrotum*, then dressed it up with his green Balsam warm, by which in few Days it digested, and the Patient was relieved: The Lips grew also daily softer, and the Wound healed apace, but all this while the Urine had no other Passage, the common *Ductus* being so closed up, by reason of the Carnosity, that we could not make any way into it with our smallest Probes or Candles. Upon which Consideration it was thought necessary to keep this Opening in *Perinaeo* for the Discharge of Urine, and in order thereto it was dressed up with a Dossil, an Emplaster and Compress, which the Patient took off at times to ease Nature. But this not satisfying him, he frequently complained of his unhappy Condition, insomuch that Mr. Ed. *Molins*, being wearied with the Patient's Solicitation, took me one Morning along with him, where again he placed the Patient as before, and attempted to make a Way from the *Apex* into the *Urethra*, but it was in vain. Whereupon he caused one of his Servants to hold the one Leg, and my self the other, while he took up the Testicles, and put the one into my Hand, and the

the other he placed in the Hand of his Servant; then with his Knife divided the *Scrotum* in the middle (we holding each Testicle the while in our Hands) and cutting into the *Urethra*, slit it the whole Length to the Incision in *Perineo*; then with a Needle and Thread stitch'd the Skin over the *Urethra*, as also the *Scrotum*, leaving the Testicles covered as before, and dressed them with Agglutinatives, by which they were cured in few Days: But the Urine neyertheless continued to flow by the Opening in *Perineo*.

A lean withered old Man, near seventy Years of Age, 11. *Observation.* having in his younger Years had many *Gonorrhœa's*, complained in his later Years of Difficulty in making his Urine, and that he voided much Matter. He sent for me, and would needs have his Disease to be the Stone, and that Matter to proceed from an Ulcer in his Bladder. I endeavoured to inform him better, but observing him so wise, I was well enough contented he should report it so, and concerned my self no farther with him, than by prescribing him an Emulsion. About a Year after, his Urine being in a manner suppress'd, he sent for me again; I made a Search, and found the Entrance into the *Urethra* eaten away below the *Frænum*, with Part of the Prepuce, and the Passage there into the *Ductus* difficult to find; and after I got in, it was so strait and stuffed with Caruncles, that I could make no Way, either by Probe or Wax-candle. I ordered him presently a Clyster, supposing thereby to force the Urine out; but it would not. I then proposed the cutting into the *Ductus* below, but he would not. The Retention of the Matter in the Seminals soon after raised a Tumour beneath the *Scrotum*, which being exceeding painful, he was contented I should make an Opening to let his Urine out. I placed him in a clear Light, with his Legs drawn up, as in the former Observation hath been said, and made Incision into the *Urethra* near the Neck of the Bladder, which having done, and satisfied myself by my Finger, and Discharge of his Urine, that I had made Opening enough, I dressed him up with the *Spanish* Balsam, there being no Blood lost in the Work, save what came from the Skin, the *Urethra* it self being cartilaginous. From that time I only dressed the Wound with a Dossil dip'd in the same

same Balsam, and applied a Pledgit over it, with an *emplast. diachalcit.* and Bandage to retain it on. To the Swelling above I applied a Cataplasm *ex rad. & fol. hyoscyami, cicutæ, &c.* by which the Tumour resolved, the Matter, indeed, discharging with the Urine by the Opening. There was not much Care taken in dressing this Ulcer, for in seven or eight Days it contracted, and being callous could not unite, if the Urine would have permitted it, but it had no other Passage. The Patient was hereby greatly relieved, and had no other Trouble but to urine this way, which I thought he would have been well pleased with, and rejoiced in the having such an easy Discharge: Yet after some Months he made me many Visits, maunding as if I had done him a Discourtesy in leaving such an Opening: Whereupon, to quiet him, I gave him some Searching-Candles, and wished him to go Home, and try if he could find any Passage from the *Apex* into the *Urethra* to the Bladder; if he could, I would readily heal that Ulcer in *Perinæo*, otherwise I wish'd him to consider how he would urine; upon which he became more satisfied. He lived some Years after, and died of Old Age.

12. Observation.

One having been long troubled with a Difficulty in Urine, was at last seized with a Tumour in *Perinæo* hard and painful. I was fetch'd, and seeing it would tend to Suppuration, I dressed it with a Cataplasm *ex rad. althææ, lilior. &c.* and having suppurated it, I opened it by Incision, and discharged a Quantity of Matter. In the dressing of it daily, I observed much Gleet, which I discovered after a while to be Urine mixed with the Matter, and, upon Search, found Caruncles in his *Urethra*. I perceiving the Cause of the Abscess, proceeded in the Cure with Candles, &c. as hath been set down in the Method of Cure: And having cleared that Passage, and made a free Way for the Urine, I made Search into the Abscess, and laid it open by Incision according to the Length of the *Perinæum*, and from that Time hastened the Incarning and Agglutination of the Ulcer, as well by Internals as Externals, and in few Weeks cicatrized it smooth and firm.

13. Observation.

One having contracted a *Gonorrhœa* beyond Sea, and not being well cured thereof, in Progress of Time Caruncles

runcles arose, and a Difficulty of Urine followed. After he had spent some Time in endeavouring his Cure Abroad, he returned toward *England*; but in his journeying through those hot Countries, an Abscess arose amongst the Seminals, and discharged its Matter under the *Pubis*, and afterwards between the Testicles, and in three or four Places of the *Perinæum*, and on both Sides of it, by reason of which the Patient lay long by the Way, and was at last with much Difficulty brought to *London*, Sir *Francis Prujean* and myself were sent for. We saw the Patient miserably emaciated, and so diseased as I have said. Decoctions of *sarsa*, with Pectorals, Emulsions, Cordial Juleps, Balsamicks, also Lenient Purgatives with *calomel*. were prescribed, and much Pains was taken in the Chirurgery, but he not being capable of the great Remedies, our Work proved unsuccessful, and he removed into some of the neighbouring Villages to drink *Ass's Milk*, and to try how he could nourish himself in the fresh Air, where I think he died.

Another who had spent his younger Days loosely, lan-
guished in his Old Age with a Carnosity, whereby the
Urine was straitened in its Passage forth, and the Semi-
nal Vessels within the *Pelvis* corrupting, inflamed the
neighbouring Tunicles of the *Rectum Intestinum*, and
passed its Matter into that Gut, and discharged it by
Stool: yet not so entirely, but that it afterward made a
Way lower out between the *Anus* and *Perinæum*, by
which Ways he had also Pollutions. His Case was de-
plorable, but the way to cure him, if possible, had been
to have made Revulsion and Evacuation of that Mat-
ter by Salivation, and afterwards by laying open those
Sinus's, as in *Fistula Ani*: But this was a poor Man, and
not governable. He lived some Years by the charitable
Assistance of Mr. *Ed. Molins* and myself, and at last was
found dead in the Street.

14. *Observation.*

The same Year I came from the Wars to *London*, I 15. *Observation.*
was sent for to one who laboured of an Abscess in *Ano*.
He discharged a purulent Matter in great Quantity. I
consulted the late deceased Mr. *Ed. Molins*, who upon
Search with his Finger in *Ano*, concluded it to arise
from some Abscess in the Prostates, and to be the
Effects of a *Gonorrhœa* ill cured. Which being con-
fess'd,

fess'd, we dress'd the Ulcer, and prescribed some little Remedies. A Day or two after we met again, made a Search with a Candle into the *Urethra*, and discover'd Caruncles, which was also apparent by his pissing. The Patient was much pain'd by the searching, and desired that Work might be forborn till his Ulcer in *Ano* was better dispos'd: Upon which my Friend declined his Visits. The Discharge of that virulent Matter fretted the Parts without, and enlarged the Opening into the *Rectum Intestinum*, so as upon passing my Finger in *Ano*, I felt it, and by a curved Probe, found the *Sinus* tend to the *Perineum*. Upon which Part I applied a Cautick, and afterwards made Incision into the lower part of the *Sinus*, whereby the Matter was partly discharged. But he had little Advantage thereby, his Disease being Venereal, required a severe Course of Physick: But he not submitting to it, the Matter afterward apostemated that Buttock, and discharged itself through many Offices. He lived seventeen Years thus, and followed his Employment Abroad.

16. Observ.

One having been many Years afflicted with the Reliques of a *Gonorrhœa*, it at length brake its way downward and raised an Abscess under the *Pubis*, and through want of sufficient Vent corroded the *Urethra*, so that his Urine came thereout. He had also a continual weeping of a virulent Matter by the *Penis*, and passed his Urine in a small Stream, and frequently forked. I began the Cure with a purging Decoction of *cassia* and *tamarind*. &c. then let him blood, and afterward purged him with *pul. cornichini* and *mer. dul.* and repeated it once in three Days; all which Time he continued his own way of dressing the Ulcer with Precipitate. But after I had awhile purged him with Mercurials, I scraped off the crusted Precipitate, and dressed it up with Pledgets dip'd in *tinctura vitrioli*, and applied a Compress over them with good Bandage, and renewed the Dressings once in three or four Days, during which I gave him ten Grains of *turbith mineral*. by which I made Revulsion of that peccant Matter. The second Day I repeated the *Turbitb*, and gave him another Dose of the same the third Day after, and purposed to have raised a Salivation; but finding the Patient not able to bear

bear any thing of that kind, I forbore the further proceeding thereby, and by Clysters and Lenient Purges carried the Matter downward. The Ulcer being cicatrized, and the *Callus* resolved, I threw off the Bandage, and concluded him well thereof. Whilst I purged him to carry off the Salivation, he spit the more, and his Mouth grew sore, which put me upon indulging him the longer; but as his Mouth healed, I purged him again, and kept him to the drinking a Decoction of *Sarsaparilla*, &c. and began to make way with Candles to extirpate the Caruncles; but the fistulous Ulcer being cured, he would not believe the extirpating the Caruncles necessary: Wherefore I submitted to his Pleasure, and finished that Course of Physick.

F I N I S.



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